

EPA Registration No.  
83923-2  
vol. 2

## Benbow, Gene

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**To:** Leanne Pruett  
**Subject:** RE: 83923-2

Gene Benbow  
Biologist, EPA  
Invertebrate & Vertebrate Branch 3  
Registration Division  
<http://epa.gov/pesticides/>  
703-347-0235

**From:** Leanne Pruett [mailto:Leanne@PyxisRC.com]  
**Sent:** Wednesday, August 26, 2015 10:49 AM  
**To:** Benbow, Gene  
**Subject:** RE: 83923-2

Thanks, Gene –

That's fine – we won't do anything with this product until we've addressed the acute dermal toxicity issue (and we're working on getting the study set and getting it taken care of right now).

Best Regards,  
Leanne

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**From:** Benbow, Gene [mailto:Benbow.Gene@epa.gov]  
**Sent:** Wednesday, August 26, 2015 6:34 AM  
**To:** Leanne Pruett  
**Subject:** RE: 83923-2

Hi Leanne,

I spoke with Venus and she's fine with that – just be aware that if we see other amendments for this product coming in prior to the dermal tox data having been submitted and reviewed we'll be asking for gloves to be added.

If that works for you please let me know – I'll make a note in the file and we'll be waiting for the data to come in (i.e. nothing needed for 83923-2 at this time).

Thanks Leanne,

Gene Benbow  
Biologist, EPA  
Invertebrate & Vertebrate Branch 3  
Registration Division  
<http://epa.gov/pesticides/>  
703-347-0235

**From:** Leanne Pruett [mailto:Leanne@PyxisRC.com]  
**Sent:** Tuesday, August 25, 2015 3:13 PM

\* No new actions until  
acute dermal test is  
submitted –  
8-25-15

Gene

**To:** Benbow, Gene  
**Subject:** RE: 83923-2

That's fine – thanks, Gene

**From:** Benbow, Gene [mailto:Benbow.Gene@epa.gov]  
**Sent:** Tuesday, August 25, 2015 3:13 PM  
**To:** Leanne Pruett  
**Subject:** RE: 83923-2

Hi Leanne,

Let me run this by Venus and one of us will get back to you – is that okay?

Gene Benbow  
Biologist, EPA  
Invertebrate & Vertebrate Branch 3  
Registration Division  
<http://epa.gov/pesticides/>  
703-347-0235

**From:** Leanne Pruett [mailto:Leanne@PyxisRC.com]  
**Sent:** Tuesday, August 25, 2015 2:49 PM  
**To:** Benbow, Gene  
**Subject:** RE: 83923-2

Hi, Gene –

I just sent you the final (hopefully ☺) version of the Bithor XT label (83923-RG).

I was talking with the registrant regarding the waterproof gloves requirement on the XT label, and also on the Bithor SC label (83923-2). He doesn't really like having to have that glove requirement and asked me to look into why it was there.

I looked at the acute tox review for the 83923-2, and saw that gloves were indeed indicated in that review; then I looked at the acute dermal tox report for the 83923-2 and saw that it was Category III, and finally looked at the label review manual, and determined that reviewer based his requirement for gloves on the WPS chapter of the manual (Chapter 10), and that it was a legitimate request/requirement.

Finally, I looked more closely at the acute dermal tox report that Ensysnex did for the 83923-2, and found that they didn't actually determine the acute dermal tox value for the product, but did a limit test at 2000 mg/kg (Acute Tox Category III). We're not sure why that was done at that level (and not the Category IV level), but are going to go back into the lab as soon as we can get the study scheduled and perform an acute dermal tox limit test at 5000 mg/kg and see if we can't get an Acute toxicity Category IV for this formulation.

So, in light of all that, I don't want to address the glove requirement for 83923-2 until we've completed the acute dermal limit test. Will Venus give us a little time to get the test conducted?

[Of course, Ensysnex understands that the glove requirement has to be put on the Bithor XT at this time, and will come in for an amendment to that label to remove the glove requirement at a later date, if the tox supports it]

Please let me know. It might be easier to discuss over the phone rather than lots of back and forth e-mails. I can be reached at (919) 324-2145.

Best Regards,  
Leanne

**From:** Benbow, Gene [<mailto:Benbow.Gene@epa.gov>]  
**Sent:** Tuesday, August 18, 2015 9:11 AM  
**To:** Leanne Pruett  
**Subject:** 83923-2

Hi Leanne,

Venus is reviewing the –RG product at the moment and expects to be done with it ASAP. Hopefully she'll push it through for QA/QC check and you can finally be done with it!

For this other referenced product (-2), she noticed that it should really have the "water proof gloves" PPE text as well. She just stopped by and asked me if I would draft an Agency letter to you to get the label in-house for amendment, but I thought I might just shoot you an email if it's something you're willing to submit to us without going through the hassle but I understand that clients differ in preferences sometimes. If you want you are more than welcome to just do this via email and we'll enter it that way (since we are the ones asking you for it).

Is this something you can do? I think so long as labeling mirrors –RG we can stamp it just the same.

Thanks Leanne --

Gene Benbow  
Biologist, EPA  
Invertebrate & Vertebrate Branch 3  
Registration Division  
<http://epa.gov/pesticides/>  
703-347-0235

## Benbow, Gene

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So, in light of all that, I don't want to address the glove requirement for 83923-2 until we've completed the acute dermal limit test. Will Venus give us a little time to get the test conducted?

[Of course, Ensystex understands that the glove requirement has to be put on the Bithor XT at this time, and will come in for an amendment to that label to remove the glove requirement at a later date, if the tox supports it]

Please let me know. It might be easier to discuss over the phone rather than lots of back and forth e-mails. I can be reached at (919) 324-2145.

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Biologist, EPA  
Invertebrate & Vertebrate Branch 3  
Registration Division  
<http://epa.gov/pesticides/>  
703-347-0235



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND  
POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS  
REGISTRATION DIVISION (7505P)

09/DEC/2014

MEMORANDUM

Subject: Acute Toxicity Review for EPA Reg. No. 83923-2

Name of Pesticide Product: Bithor SC  
EPA Reg. No.: 83923-2  
DP Barcode: D423868  
Decision No.: 496244  
Action Code: R340  
PC Codes: 128825 (bifenthrin), 129099 (imidacloprid)

From: Eugenia McAndrew, Biologist  
Chemistry, Inerts Toxicology Assessment Branch  
Registration Division (7505P)

To: Melody Banks, RM Team 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)

Applicant: Ensystex IV, Inc.  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> Street  
Gig Harbor, WA 98332

*Agency initiated  
Gene - would you  
pls. enter \$600  
for yourself - 4  
ask Leanne to  
update accordingly*

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Imidacloprid	5.0
Bifenthrin	4.0
<u>Other Ingredient(s):</u>	<u>91.0</u>
Total:	100.0%

**ACTION REQUESTED:** The Risk Manager requests a review of six acute toxicity studies submitted in support of revising the first aid and precautionary language for EPA Reg. No. 83923-2.

**BACKGROUND:** Ensystex IV, Inc. is seeking to amend the registration for Bithor SC, EPA Reg. No. 83923-2. In a letter dated October 7, 2014 Pyxis Regulatory Consulting, Inc. explains:

On behalf of Ensystex IV, Inc. please find the enclosed label amendment adding directions for use on carpenter ants. The First Aid and Precautionary Statements language are also being revised based on results of the enclosed acute toxicity studies. No change in signal word is required based on the acute toxicity results.

At the time of registration in 2007, no acute toxicity data were submitted for 83923-2 because it was registered as substantially similar to another product (McAndrew; D336068; EPA File symbol 83923-E; 31/JAN/2007). The toxicity categories assigned for 83923-2 were all Category IV except for acute oral toxicity which was Toxicity Category III. The product is not a dermal sensitizer and the signal word is Caution.

The six acute toxicity studies submitted in this action have MRIDs 494849-01 to -06. The submission includes a basic CSF, a proposed label showing the changes to the precautionary and first aid statements and company letter.

**GLP:** Yes

**DEVIATIONS:** None

**RECOMMENDATIONS:**

1. The six studies are classified as acceptable. The results show a change in the toxicity categories for acute dermal and primary eye irritation from IV to III.
2. The revised acute toxicity profile for Bithor SC, EPA Reg. No. 83923-2, is as follows:

acute oral toxicity	III	acceptable	MRID 49484901
acute dermal toxicity	III	acceptable	MRID 49484902
acute inhalation toxicity	IV	acceptable	MRID 49484903
primary eye irritation	III	acceptable	MRID 49484904
primary skin irritation	IV	acceptable	MRID 49484905
dermal sensitization	neg.	acceptable	MRID 49484906



**LABELING:** Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

**PRODUCT ID #:** 083923-00002

**PRODUCT NAME:** Bithor SC

#### **PRECAUTIONARY STATEMENTS**

**SIGNAL WORD:** CAUTION

#### **Hazards to Humans and Domestic Animals:**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse.

#### **First Aid:**

If swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If on skin:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

If in eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

#### **User Safety Recommendations:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

## DATA EVALUATION RECORD

**Product Reg. No.:** 83923-2  
**Product Name:** Bithor SC

<b>1. DP BARCODE:</b> 423868				
<b>2. PC CODES:</b> 128825, 129099				
<b>3. CURRENT DATE:</b> December 9, 2014				
<b>4. TEST MATERIAL:</b> Acute oral study and Acute dermal study: Bithor SC (Lot # 010711; EPSL Ref. No. 110204-1D; 5% Imidacloprid and 4% Bifenthrin; pH 5.54 (1% aq.); specific gravity 1.003 g/mL; off-white liquid density 1.073 g/mL; off-white liquid)  Acute inhalation study, Primary eye irritation study, Primary skin irritation study, Dermal sensitization study: Bithor SC (Batch # 020812; PSL Reference Number 120214-12D and 120222-21D; 5% Imidacloprid and 4% Bifenthrin; pH 5.5 (1% aq.); off-white liquid)				
Study/Species/Lab Study # /Date	MRID	Results	Tox Cat	Core Grade
Acute oral toxicity / rat Eurofins Product Safety Labs Study #31444/April 18, 2011 OCSPP 870.1100; OECD 425	49484901	LD <sub>50</sub> Females = 1098 mg/kg (95% CI of 550 to 2000 mg/kg)  8 females tested: 175 mg/kg - 1 550 mg/kg - 3 2000 mg/kg - 4  Mortality: All animals tested at 2000 mg/kg died within 2 days of test substance administration  2000 mg/kg; Toxic signs in decedents: nasal discharge, hypoactivity, abnormal posture, tremors, ano-genital staining and/or reduced fecal volume; gross necropsy showed discoloration of the lungs, liver and/or intestines and distention of the stomach and/or intestines  175 and 550 mg/kg: All animals survived and gained weight. Clinical signs: reduced fecal volume noted for 1 rat from each dose on days 1 or 2. No gross	III	A

		abnormalities were noted at necropsy.		
Acute dermal toxicity / rat Eurofins Product Safety Labs Study #31445/April 5, 2011 OCSPP 870.1200; OECD 402	49484902	LD <sub>50</sub> > 2000 mg/kg (both sexes)  All animals survived and gained weight. The only clinical sign noted was superficial eschar at the dose site of 1 female between days 7 and 9. No gross abnormalities were noted at necropsy.	III	A
Acute inhalation toxicity / rat Product Safety Labs Study #33954/May 8, 2012 OCSPP 870.1300; OECD 403	49484903	LC <sub>50</sub> > 5.11 mg/L (both sexes)  MMAD: 2.22, 3.31µm GSD: 2.13, 2.05  All animals survived. Although all animals lost weight by day 1, all animals showed a continued weight gain thereafter through day 14. Clinical signs noted were abnormal respiration, hypoactivity, abnormal gait, ano-genital staining, ocular and nasal discharge, facial staining and/or tremors with recovery by day 7. No gross abnormalities were noted at necropsy.	IV	A
Primary eye irritation / rabbit Product Safety Labs Study #33955/May 8, 2012 OCSPP 870.2400; OECD 405	49484904	3 females tested; ocular anesthetic used No corneal opacity or iritis were observed. Positive conjunctival redness (score of 2-3) was noted in all eyes at 1, 24, 48 and 72 hrs. with 1 eye still positive on day 4, resolving by day 7. Positive scores for chemosis were noted in 2 eyes at 1 hr, in all eyes at 24 hrs and in 2 eyes at 48 hrs resolving by day 7. All eyes were free of irritation by day 7.	III	A

		A score of 2 was noted for discharge in all eyes at 1 and 24 hrs (not a positive effect).		
Primary dermal irritation / rabbit Product Safety Labs Study #33956/May 8, 2012 OCSPP 870.2500; OECD 404	49484905	PDI = 0.5 3 females tested  Very slight erythema was noted at 2 sites and very slight edema at 1 site at 1 hr and 24 hrs after patch removal. All sites were free of irritation by 48 hrs.	IV	A
Dermal sensitization/mouse Product Safety Labs Study #33957/May 8, 2012 OCSPP 870.2600; OECD 429	49484906	Negative Three concentrations tested - 25%, 50% and 100% Stimulation Index values all < 3 Appropriate positive control provided	--	A

**Core Grade Key: A =Acceptable, S = Supplementary, U = Unacceptable, D = Data Gap  
W = Waived**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL  
SAFETY AND POLLUTION  
PREVENTION

April 14, 2015

I, Venus Eagle, Invertebrate and Vertebrate Branch 3, Registration Division, Office of Pesticide Programs, Office of Chemical Safety and Pollution Prevention, United States Environmental Protection Agency ("EPA"), certify that the pesticide product (s) listed below is, as of the date of this letter, a registered product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and that as such, the product(s) may be sold and marketed in the United States of America as authorized and limited by FIFRA. A true and correct copy of the product label approved by EPA is attached to accompany this letter.

Registration of this product(s) with EPA also denotes that the registrant listed below is responsible for ensuring full compliance with all the laws of the United States of America, or governing jurisdiction, regarding the sale, storage and/or disposal of the product(s). Further, the recipient of this letter is on notice that the referenced registration and/or the accompanying label may change subsequent to the date of this letter. EPA assumes no responsibility to notify the recipient(s) (i.e., Peru) of this letter of any change in the status of the registration(s) and/or the product label for the product(s) listed below.

EPA has issued registration numbers for the product(s) listed below to:

Ensystex IV, Inc  
P. O. Box 87329  
Fayetteville, NC 28304

EPA Registration Number: 83923-2  
Name of Product: BITHOR SC

7

Venus Eagle  
Risk Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)



# Receipt for Section 3

S: 966906

Milestone Email:

Venus Engle #1

Regulatory Type: Product Registration - Section 3



Application Type: Amendment



Company: 83923 ENSYSTEX IV, INC

Fee For Service:

☒ Yes ☐ No

Billable:

☒ Yes ☐ No



Print Letter

Enter More Information

Tracking

Risk Manager: Registration Division, Risk Management Team 1



Product #: 83923-2

Product Name: BITHOR SC

Override#

Me Too  
Section3:

Me Too Product  
Name:

Application Date: 09-Apr-2015



OPP Rec'd Date: 10-Apr-2015



Front End Date: 10-Apr-2015



Risk Manager Send Date: 10-Apr-2015



FFS Due Date: 01-Jun-2015

Negotiated Due Date:

OPP Target Date:

Fast Track ☐

See Legend

Receipt Description:

Gold Seal Certificate for Peru.

Receipt Content

Des

Other

Gold Seal

View/Edit

Form

Signature Date



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

April 10, 2015

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-503228  
EPA File Symbol or Registration Number: 83923-2  
Product Name: BITHOR SC  
EPA Receipt Date: 10-Apr-2015  
EPA Company Number: 83923  
Company Name: ENSYSTEX IV, INC

KEN KENDALL  
ENSYSTEX IV, INC  
PO Box 87329  
FAYETTEVILLE, NC 28304-

SUBJECT: Receipt of Request for Gold Seal Certification Letter(s)

Dear Registrant:

The Office of Pesticide Programs has received your request for Gold Seal Certification letter(s) that is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The action has been identified as action code M006:

UP TO 5 GOLD SEAL CERTIFICATION LETTERS PER REGISTRATION

No additional payment is due at this time. If you have any questions, please contact Betty Williams at (703) 308-0132.

Sincerely,

A handwritten signature in black ink, appearing to be "r/24".

Front End Processing Staff  
Information Technology & Resources Management Division

# **ENSYSTEX, Inc.**

2175 Village Dr., P. O. Box 87329, Fayetteville, NC 28304  
Voice - 1-888-398-3772 Fax - 1-888-368-4479 [www.ensystex.com](http://www.ensystex.com)

April 9, 2015

Document Processing Desk  
Office of Pesticide Programs (7504P)  
US. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202

Attention: Gold Seal Label Request M006

I am requesting a Gold Seal Label for Bithor SC EPA Reg. # 83923-2, Borathor EPA Reg. # 81824-8 and Prothor SC 2 EPA Reg. # 83923-4. These labels will be used for registration purposes the Peru. You will find enclosed a check for \$789.00 for the PRIA Fee for M006 for these products. Thank you very much in advance for your prompt response.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ken Kendall', written in a cursive style.

Ken Kendall MA; B.C.E.  
V.P. Technical Services & Governmental Affairs



INVOICE #	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER #	NET AMOUNT
	4/9/2015	789.00	0.00	000029699	789.00
TOTAL ▶		789.00	0.00		789.00

Another Quality Product From Altec (800) 333-5180 PFWB53

THIS DOCUMENT IS PROTECTED BY INVISIBLE FIBERS AND CHEMICALLY REACTIVE PAPER. HOLD TO LIGHT TO VERIFY A TRUE WATERMARK.

ENSYSTEX, INC.  
P.O. BOX 87329  
FAYETTEVILLE, NC 28304-7329  
(910) 485-5720

BB&T  
BRANCH BANKING AND TRUST COMPANY  
FAYETTEVILLE, NC 28302  
66-112/531

022055

DATE  
4/9/2015

CHECK NO.  
022055

SEVEN HUNDRED EIGHTY-NINE AND XX / 100

PAY TO THE ORDER OF

ENVIRONMENTAL PROTECTION AGENCY  
ONE POTOMAC YARD ROOM S-4900  
2777 S. CRYSTAL DRIVE  
ARLINGTON, VA 22202

AMOUNT

\*\*\*\*789.00

VOID AFTER 60 DAYS



  
AUTHORIZED SIGNATURE

MP

022055

\*Commercial/financial information may be entitled to confidential treatment\*



7/28/15  
Gen B.  
Please file  
in the jacket

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL  
SAFETY AND POLLUTION  
PREVENTION

April 2, 2015

I, Venus Eagle, Invertebrate and Vertebrate Branch 3, Registration Division, Office of Pesticide Programs, Office of Chemical Safety and Pollution Prevention, United States Environmental Protection Agency ("EPA"), certify that the pesticide product (s) listed below is, as of the date of this letter, a registered product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and that as such, the product(s) may be sold and marketed in the United States of America as authorized and limited by FIFRA. A true and correct copy of the product label approved by EPA is attached to accompany this letter.

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EPA has issued registration numbers for the product(s) listed below to:

Ensystex Iv, Inc  
4110 136Th Street  
Gig Harbor, WA 98332

EPA Registration Number: 83923-2  
Name of Product: BITHOR SC

Venus Eagle  
Risk Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division ()



# **ENSYSTEX, Inc.**

2175 Village Dr., P. O. Box 87329, Fayetteville, NC 28304  
Voice - 1-888-398-3772 Fax - 1-888-368-4479 www.ensystex.com

March 20, 2015

Document Processing Desk  
Office of Pesticide Programs (7504P)  
US. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202

Attention: Gold Seal Label Request M006

Dear Ms. Eagle,

I am requesting a Gold Seal Label for Bithor SC EPA Reg. # 83923-2. This label will be used for registration purposes the Philippines. You will find enclosed a check for \$263.00 for the PRIA Fee for M006 for this product. Thank you very much in advance for your prompt response.

Sincerely,

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Ken Kendall MA; B.C.E.  
V.P. Technical Services & Governmental Affairs



# Receipt for Section 3

S: 966052

Milestone Email:

Regulatory Type: Product Registration - Section 3



Application Type: Amendment



Company: 83923 ENSYSTEX IV, INC

Fee For Service:

☒ Yes

☐ No

Billable:

☒ Yes

☐ No



Print Letter

Enter More Information

Tracking

Risk Manager: Registration Division, Risk Management Team 1



Product #: 83923-2

Product Name: BITHOR SC

Override#

Me Too  
Section3:

Me Too Product  
Name:

Application Date: 20-Mar-2015



OPP Rec'd Date: 23-Mar-2015



Front End Date: 25-Mar-2015



Risk Manager Send Date: 25-Mar-2015



FFS Due Date: 13-May-2015

Negotiated Due Date:

OPP Target Date:

Fast Track

Receipt Description:

Gold Seal Certificate for the Philippines. Please send certificate to company, not to the agent.

Receipt Content

Des

Other

Gold Seal

View/Edit

Form A:

Signature Date

B



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

March 25, 2015

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-502633  
EPA File Symbol or Registration Number: 83923-2  
Product Name: BITHOR SC  
EPA Receipt Date: 23-Mar-2015  
EPA Company Number: 83923  
Company Name: ENSYSTECH IV, INC

KEN KENDALL  
ENSYSTECH IV, INC  
PO Box 87329  
FAYETTEVILLE, NC 28304-

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Sincerely,

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Front End Processing Staff  
Information Technology & Resources Management Division

ENSYSTEX, INC.

DATE 3/20/2015

CHECK NO. 021923

VENDOR KEY ENV002

INVOICE #	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER #	NET AMOUNT
	3/20/2015	263.00	0.00	000029567	263.00
<b>TOTAL</b>		263.00	0.00		263.00

Another Quality Product From Altec (800) 333-5180 PFWB53

THIS DOCUMENT IS PROTECTED BY INVISIBLE FIBERS AND CHEMICALLY REACTIVE PAPER. HOLD TO LIGHT TO VERIFY A TRUE WATERMARK.

ENSYSTEX, INC.

P.O. BOX 87329  
FAYETTEVILLE, NC 28304-7329  
(910) 485-5720

BB&T  
BRANCH BANKING AND TRUST COMPANY  
FAYETTEVILLE, NC 28302  
66-112/531

021923

DATE  
3/20/2015

CHECK NO.  
021923

TWO HUNDRED SIXTY-THREE AND XX / 100

AMOUNT

\*\*\*\*263.00



PAY  
TO THE  
ORDER OF

ENVIRONMENTAL PROTECTION AGENCY  
ONE POTOMAC YARD ROOM S-4900  
2777 S. CRYSTAL DRIVE  
ARLINGTON, VA 22202

VOID AFTER 60 DAYS



  
AUTHORIZED SIGNATURE MP

021923





7/16/15  
Ken please  
in the jacket

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL  
SAFETY AND POLLUTION  
PREVENTION

June 15, 2015

I, Venus Eagle, Invertebrate and Vertebrate Branch 3, Registration Division, Office of Pesticide Programs, Office of Chemical Safety and Pollution Prevention, United States Environmental Protection Agency ("EPA"), certify that the pesticide product (s) listed below is, as of the date of this letter, a registered product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and that as such, the product(s) may be sold and marketed in the United States of America as authorized and limited by FIFRA. A true and correct copy of the product label approved by EPA is attached to accompany this letter.

Registration of this product(s) with EPA also denotes that the registrant listed below is responsible for ensuring full compliance with all the laws of the United States of America, or governing jurisdiction, regarding the sale, storage and/or disposal of the product(s). Further, the recipient of this letter is on notice that the referenced registration and/or the accompanying label may change subsequent to the date of this letter. EPA assumes no responsibility to notify the recipient(s) (i.e., Jamaica) of this letter of any change in the status of the registration(s) and/or the product label for the product(s) listed below.

EPA has issued registration numbers for the product(s) listed below to:

Ensyslex IV, Inc  
P. O. Box 87329  
Fayetteville, NC 28304

EPA Registration Number: 83923-2  
Name of Product: BITHOR SC

Venus Eagle  
Risk Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)



# **ENSYSTEX, Inc.**

2175 Village Dr., P. O. Box 87329, Fayetteville, NC 28304  
Voice - 1-888-398-3772 Fax - 1-888-368-4479 www.ensystex.com

June 9, 2015

Document Processing Desk  
Office of Pesticide Programs (7504P)  
US. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202

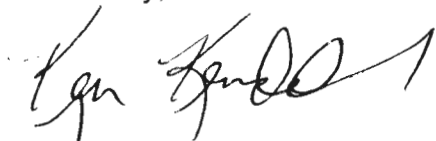
*Venus Eagle*

Attention: Gold Seal Label Request M006

Dear Ms. Eagle,

I am requesting a Gold Seal Label for Bithor SC EPA Reg. # 83923-2. This label will be used for registration purposes in Jamaica. You will find enclosed a check for \$263.00 for the PRIA Fee for M006 for this product. Thank you very much in advance for your prompt response.

Sincerely,



Ken Kendall MA; B.C.E.  
V.P. Technical Services & Governmental Affairs



Receipt for Section 3

S: 969607

Milestone Email:

VENUS Eagle

Regulatory Type: Product Registration - Section 3



Resubmission:

es ☒ No

Application Type: Amendment



Fee For Service:

☒ Yes ☐ No

Billable:

☒ Yes ☐ No



Print Letter

Enter More Information

Tracking

Company: 83923 ENSYSTEX IV, INC

Risk Manager: Registration Division, Risk Management Team 1



Product #: 83923-2

Product Name: BITHOR SC

Overides

Me Too  
Section3:

Me Too Product  
Name:

Application Date: 09-Jun-2015



OPP Rec'd Date: 10-Jun-2015



Front End Date: 11-Jun-2015



Risk Manager Send Date: 11-Jun-2015



FFS Due Date: 03-Aug-2015

Negotiated Due Date:

OPP Target Date:

Fast Track: ☐

New Ingredient: ☐

Receipt Description:

Gold Seal Certificate for Jamaica. Please use the company's address in the letter, not their agent's address.

New Ingredient

Request Date

New Ingredient

Received Date

Form A: ☐ Signature Date

Form B: ☐ Signature Date

Receipt Content

Des

Other

Gold Seal

III

View/Edit



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

June 11, 2015

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-505836  
EPA File Symbol or Registration Number: 83923-2  
Product Name: BITHOR SC  
EPA Receipt Date: 10-Jun-2015  
EPA Company Number: 83923  
Company Name: ENSYSTEX IV, INC

KEN KENDALL  
ENSYSTEX IV, INC  
PO Box 87329  
FAYETTEVILLE, NC 28304-

SUBJECT: Receipt of Request for Gold Seal Certification Letter(s)

Dear Registrant:

The Office of Pesticide Programs has received your request for Gold Seal Certification letter(s) that is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The action has been identified as action code M006:

UP TO 5 GOLD SEAL CERTIFICATION LETTERS PER REGISTRATION

No additional payment is due at this time. If you have any questions, please contact Betty Williams at (703) 308-0132.

Sincerely,

A handwritten signature in black ink, appearing to read "m/jk".

Front End Processing Staff  
Information Technology & Resources Management Division

ENSYSTEX, INC.

		DATE 6/9/2015		CHECK NO. 050084	VENDOR KEY ENV002
INVOICE #	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER #	NET AMOUNT
	6/9/2015	263.00	0.00	000030032	263.00
TOTAL ▶		263.00	0.00		263.00

Another Quality Product From Altec (800) 333-5180 PFWB530L

THIS DOCUMENT IS PROTECTED BY INVISIBLE FIBERS AND CHEMICALLY REACTIVE PAPER. HOLD TO LIGHT TO VERIFY A TRUE WATERMARK.

ENSYSTEX, INC.  
P.O. BOX 87329  
FAYETTEVILLE, NC 28304-7329  
(910) 485-5720

BB&T  
BRANCH BANKING AND TRUST COMPANY  
FAYETTEVILLE, NC 28302  
66-112/531

050084

DATE 6/9/2015  
CHECK NO. 050084

TWO HUNDRED SIXTY-THREE AND XX / 100

PAY TO THE ORDER OF  
ENVIRONMENTAL PROTECTION AGENCY  
ONE POTOMAC YARD ROOM S-4900  
2777 S. CRYSTAL DRIVE  
ARLINGTON, VA 22202

AMOUNT  
\*\*\*\*263.00

VOID AFTER 60 DAYS



  
AUTHORIZED SIGNATURE

050084

ADDITIONAL SECURITY FEATURES

\*Commercial/financial information may be entitled to confidential treatment\*

# PROCESSING REQUEST

Reg # 83923-2

Decision # 502326

Description: Minor Label Revisions to Facilitate  
Registration in the State of CA

## Material Available Electronically (see PPLS):

☐ Electronic Label/Letter Dated

☐ Other:

## Material Sent (see jacket):

☐ Stamped Label/Letter Dated

☒ Notification Dated 3/20/2015

☐ New CSF(s) Dated

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Melody Banks

Division: IVB3

Phone: 3055413

Date: 3/20/2015

**PYXIS REGULATORY CONSULTING, INC.**

4110 136<sup>th</sup> St. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
www.PyxisRC.com

March 5, 2015

**COURIER DELIVERY**

Venus Eagle (PM 1)  
Document Processing Desk (**NOTIF**)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Ensystex IV, Inc. – Bithor SC (EPA Reg. No. 83923-2)  
Notification of Minor Label Revisions per PRN 98-10 to Facilitate Registration in the State of California

Dear Ms. Eagle,

On behalf of Ensystex IV, Inc. please find the enclosed notification of minor label revisions to the Bithor SC (EPA Reg. No. 83923-2) labeling to facilitate registration in the State of California. Ensystex is off-labeling application for control of beetles (including Japanese beetles) in California. The following changes have been made to the Bithor SC labeling:

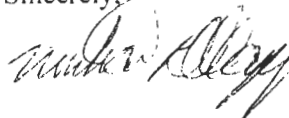
- P. 9 – Added an asterisk after the subheading “Pests Controlled” immediately under the main heading PESTS OUTSIDE AND AROUND STRUCTURES.
- P. 9 – Below the list of pests controlled, added the statement “\*Not approved for use on beetles, including Japanese Beetle in California.”
- P. 10 - Added an asterisk after the subheading “Pests Controlled” immediately under the main heading PESTS INSIDE STRUCTURES (OTHER THAN FOOD/FEED AREAS OF FOOD/FEED HANDLING ESTABLISHMENTS) INCLUDING MODES OF TRANSPORT.
- P. 11 - Below the list of pests controlled, added the statement “\*Not approved for use on beetles, including Japanese Beetle in California.”

In support of this notification submission, we submit the following documents:

1. Completed Application for Registration (EPA Form 8570-1)
2. One (1) copy of the Bithor SC labeling with changes tracked
3. One (1) copy of the Bithor SC labeling with changes incorporated
4. Certification with Respect to Label Integrity
5. One (1) copy of the Bithor SC labeling on CD
6. Letter of Authorization

Please feel free to contact me by phone (253) 853-7369 or by email at Mike@PyxisRC.com if you have any questions or need any additional information.

Sincerely,



Michael Kellogg

Enclosures

cc: D. Nimocks; Ensystex IV, Inc.



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 83923-2	2. EPA Product Manager V. Eagle	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Ensystex IV, Inc. / Bithor SC	PM# 1	
5. Name and Address of Applicant (Include ZIP Code) Ensystex IV, Inc. c/o Pyxis Regulatory Consulting, Inc. 4110 136th St. NW Gig Harbor, WA 98332  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar to <b>NOTIFICATION</b> and labeling to: EPA Reg. No. <u>MAR 20 2014</u> Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of minor label revisions per PR Notice 98-10 to facilitate registration in the State of California. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA. Should you have any questions, please contact me at (email) Mike@PyxisRC.com or (phone) 253-853-7369.

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 1 gallon		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Michael Kellogg		Title Agent	
		Telephone No. (Include Area Code) (253) 853-7369	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received (Stamped)
2. Signature 		3. Title Agent	
4. Typed Name Michael Kellogg		5. Date 3/5/15	

# **ENSYSTEX IV, Inc.**

2713 Breezewood Ave., P. O. Box 87329, Fayetteville, NC 28304  
Voice - 1-910-485-5720 Fax - 1-888-368-4479 www.ensystex.com

April 18, 2011

To Whom It May Concern:

RE: Letter of Authorization

Dear Sir or Madam:

Please let this letter serve to confirm that Janelle Kay and Michael Kellogg of Pyxis Regulatory Consulting, Inc. are authorized to act as agent for Ensystex IV, Inc. (EPA Company Number 83923), before the U.S. Environmental Protection Agency, California Department of Pesticide Regulation Pesticide Registration Branch and other state governmental agencies in all matters regarding our pesticide registrations pursuant to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136 et seq. and state law.

If you have any questions, please do not hesitate to contact me.

Sincerely,



Kenneth Kendall MA; B.C.E.  
V.P. Technical Services & Governmental Affairs

cc: Pyxis Regulatory Consulting, Inc.

# Certification with Respect to Label Integrity


version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
83923-2	March 5, 2015	083923-00002.20150305.Bithor SC label notification.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

  
Signature

  
Date

Michael Kellogg

Name (typed)

Agent

Title



## **Banks, Melody**

---

**From:** Mike Kellogg <Mike@PyxisRC.com>  
**Sent:** Tuesday, March 17, 2015 11:12 AM  
**To:** Banks, Melody  
**Cc:** Eagle, Venus  
**Subject:** Label for EPA Reg. No. 83923-2  
**Attachments:** 083923-00002.20150305.Bithor SC label notification\_tracked changes.pdf

Melody,

I received your voicemail this morning. Attached please find a tracked changes version of the Bithor SC label submitted with notification dated March 5, 2015. I've highlighted the changes in yellow which appear on pg.'s 9, 10, 11 and 12.

Should you require anything further, please do not hesitate to contact me.

Regards,  
Mike Kellogg  
Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> St. NW  
Gig Harbor, WA 98332  
T: 253-853-7369  
F: 253-853-5516  
E: Mike@PyxisRC.com

**Receipt for Section 3**

S: 965207 Milestone Email:

Regulatory Type: Product Registration - Section 3

Application Type: Notification

Company: 83923 ENSYSTEX IV, INC

Risk Manager: Registration Division, Risk Management Team 1

Product #: 83923-2 Product Name: BITHOR SC

Override#:

Me Too Section3:  Me Too Product Name:

Application Date: 05-Mar-2015  OPP Rec'd Date: 06-Mar-2015

Front End Date: 09-Mar-2015  Risk Manager Send Date: 09-Mar-2015

FFS Due Date:  Negotiated Due Date:

OPP Target Date:

Fast Track: ☐ New Ingredient: ☐

Receipt Description:

Label Notification to facilitate CA registration re: adding asterisk after subheadings (pgs. 9, 10); adding statement "Not approved for use on beetles, including Japanese Beetle in California" (pgs. 9, 11)

Form A: ☐ Signature Date:  Form B: ☐ Signature Date:

New Ingredient Request Date:

New Ingredient Received Date:

**Receipt Content**

Receipt Content	Des
Paper Label	

Molly

Pls have turn  
 send you a highlighted  
 label as I didn't  
 see the addition  
 in yellow or turn down  
 Thank!

Kevin



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 20, 2015

Mr. Michael Kellogg  
Ensystex IV, Inc.  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> Street NW  
Gig Harbor, WA 98332

Subject: Label Notification per PRN 98-10 – Minor Label Revisions to Facilitate  
Registration in the State of California  
Product Name: Bithor SC  
EPA Registration Number: 83923-2  
Application Date: March 5, 2015  
Decision Number: 502326

Dear Mr. Kellogg:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, you may contact Melody Banks at 703 305 5413 or via email at [Banks.Melody@epa.gov](mailto:Banks.Melody@epa.gov).

Sincerely,

A handwritten signature in dark ink, appearing to read "Melody Banks", is written over a faint, larger version of the same signature.

Melody Banks, Registration Specialist  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs



## NOTIFICATION

MAR 20 2014

# BITHOR SC

For control of listed pests indoors and outdoors in and around residential, commercial, industrial, institutional and public structures and buildings.

For control of listed insect pests of turfgrass, landscape ornamentals, shrubs, and ornamental trees and structures in lawns, landscapes, playgrounds, parks and athletic fields.

Active Ingredient:	By Wt.
Imidacloprid .....	5.0%
Bifenthrin* .....	4.0%
Other Ingredients: .....	91.0%
TOTAL: .....	100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

Contains 0.45 pounds of imidacloprid and 0.36 pounds of bifenthrin per gallon

EPA Reg. No. 83923-2 EPA Est. 81824-NC-001

**STOP – Read the label before use**

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

(PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.)

(TO THE USER: If you cannot read and understand English, do not use this product until the label has been fully explained to you.)

For product use information call 1-866-FOR-THOR (866-367-8467) or visit [www.for-thor.com](http://www.for-thor.com).

NET CONTENTS: Gallon(s)

Manufactured by:

**ENSYSTEX IV, Inc.**

2175 Village Drive, Fayetteville, NC 28304

## FIRST AID

If swallowed:	<ul style="list-style-type: none"><li>• Call poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>
If on skin or clothing:	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If in eyes:	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

## HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-(800)-369-4352 for emergency medical treatment information.

## NOTE TO PHYSICIAN

**Note To Physician:** No specific antidote is available. Treat the patient symptomatically. This product contains a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

## PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

## CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment:** Applicators and other handlers must wear long-sleeved shirt, long pants, shoes and socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Run-off may be hazardous to aquatic organisms in water adjacent to treated areas.

This product contains a chemical with properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when heavy rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies and drainage systems.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging in the treatment area.

#### PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS  
EXIST FOR THIS PRODUCT  
BECAUSE OF RISK TO  
POLLINATORS. FOLLOW  
APPLICATION RESTRICTIONS  
FOUND IN THE DIRECTIONS FOR  
USE TO PROTECT POLLINATORS



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators. Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar. Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator active plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>. Pesticide incidents (for example, bee kills) should immediately be reported to the state / tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at [beekill@epa.gov](mailto:beekill@epa.gov).

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See individual use sites for specific pollinator protection application restrictions. If none exist under the specific use site, for outdoor foliar applications, follow these application directions.



Do not apply BITHOR SC while bees are foraging. Do not apply BITHOR SC to plants that are flowering. Only apply after all flower petals have fallen off.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### RESTRICTIONS

- Do not allow people or pets on treated surfaces until the spray has dried.
- Do not water the treated areas to the point of run-off.
- Do not make applications during rain.
- Do not make applications directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.
- Do not use household utensils to measure BITHOR SC.
- For broadcast applications, do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per

application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year.

- For application to lawns, turf, vegetation or to the soil by injection or drench, do not exceed 0.4 lb of imidacloprid (7 pints of Bithor SC) per acre per year.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon
- Do not harvest or consume fruit or nuts from any tree that has been treated within 1 year (365 days).
- BITHOR SC is not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.
- BITHOR SC is not for use in commercial greenhouses, nurseries, or on grasses grown for seed, golf courses, turfgrass grown for sale (sod farms) or on commercial fruit and nut trees.
- Do not apply to turf that is frozen, waterlogged or is saturated with water. Turf in this condition will not allow the necessary vertical distribution of the active ingredient down into the soil.
- Do not apply within aircraft cabins.
- Do not apply in food/feed areas of food and feed handling establishments.
- Do not apply to furniture or upholstery where prolonged contact with humans will occur.
- Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.
- Remove or cover and disconnect aquariums during application.
- Do not apply a broadcast application to interior surfaces of living areas.
- Do not apply to pets, crops, sources of electricity or firewood.
- During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material, except for soil surfaces in crawlspaces.
- Wear protective clothing, unvented goggles, gloves and respirator when making an overhead application or when applying in poorly ventilated indoor areas.
- Do not allow dripping or runoff to occur during indoor applications.
- For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.
- Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.
- Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.
- Do not apply this product in nursing home or patient rooms or in any rooms while occupied by the elderly or infirmed.
- Do not apply in classrooms when they are in use.

- Do not apply when occupants are present in the immediate area in institutions such as health care facilities, libraries, schools, offices, etc.
- Do not apply in livestock buildings such as barns.
- Do not apply where electrical short circuits can occur.
- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not allow runoff or puddling of irrigation water following application.
- Do not apply by air.
- Do not apply by any type of irrigation system.

#### **Restrictions Applicable to New York State only:**

Do not apply BITHOR SC containing solutions to grass or turf within 100 feet of a body of water (lake, pond, river, stream, wetland or drainage ditch).

Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### **Additional Application Restrictions for Residential Outdoor Surface and Space Sprays:**

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

- (1) Applications to soil or vegetation, as listed on this label, around structures;
- (2) Applications to lawns, turf, and other vegetation, as listed on this label;
- (3) Applications to the side of a building, up to a maximum height of 3 feet above grade;
- (4) Applications to underside of eaves, soffits, doors or windows permanently protected from rainfall by a covering, overhang, awning or other structure;
- (5) Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch width;
- (6) Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other conditions that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, windows, door and eaves are limited to spot and crack-and-crevice applications only.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If container is leaking or if material is spilled for any reason or cause, carefully contain any spilled material to prevent non-target contamination. Do not walk through spilled material and dispose of as directed for pesticides below. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. Refer to *Precautionary Statements* on label for hazards associated with the handling of this material. In spill or leak incidents, keep unauthorized people away. You may contact ENSYSTEX IV for decontamination procedures or any other assistance that may be necessary at 1-866-367-8467 or contact Chemtrec at 1-800-424-9300.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## PRODUCT INFORMATION

BITHOR SC controls or suppresses a wide spectrum of insects and mites on turfgrass, trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants and pests in, at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports, cemeteries, lawns and interior plantscapes. BITHOR SC mixes readily with water and other aqueous carriers.

Some insects can develop resistance to products used repeatedly for their control. Because the development of resistance by an insect to an insecticide cannot be predicted, the use of this product should be according to established resistance management strategies. Consult

your local or state pest management authorities for details.

If necessary, consult resources in horticulture in your area (such as your Cooperative Extension Service) to determine appropriate application timing and cultural practices to control different types of pests.

## APPLICATION FOR TURF PESTS

BITHOR SC can be used for the control of a wide range of listed pests of turfgrass. Because BITHOR SC's active ingredients have long lasting residual activity, applications for control of subsurface feeders can be made before the occurrence of egg laying activity. BITHOR SC's active ingredients also have sufficient knockdown and residual activity to provide remedial and residual control of surface feeding pests.

**Restrictions:** Do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year. Do not allow this product to contact plants in bloom while bees are foraging the treatment area. Not for use on commercial sod farms.

### Application Sites

Permitted sites: lawns, grounds and landscapes at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports and cemeteries.

### Application Timing

The active ingredients in BITHOR SC have sufficiently long-lasting residual activity that applications can be made prior to egg laying by the target pest(s). Optimum control of turf pests will be achieved when application is made prior to egg hatch followed by sufficient irrigation or rainfall to move the active ingredient through the thatch and down into the underlying soil. Applications can be timed based on past experiences at the site or in the area, current results of adult monitoring/trapping or other methods.

### Post Application Watering and Mowing

Do not mow turf or lawn area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected. Optimum control is achieved if irrigation or rainfall occurs within 24 hours after application. Uniformity of application may be adversely affected if turf is mowed prior to irrigation/rainfall occurring.

### Application Preparations

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use



by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

Because certain cultivars may be sensitive to the final spray solution, test the effects of applications of different rates and volumes of mixed solution on a small patch of a type of grass (with observations over one week to detect the occurrence of negative effects) before application of solutions to large areas of that type of grass.

#### Application Equipment and Methods

Apply BITHOR SC mixed in water (according to the table below) as a spray of uniform, coarse droplets at a pressure low enough to eliminate drift from the target area. Properly calibrated application equipment must be used to apply BITHOR SC. Check calibration periodically to ensure that equipment is working properly.

#### Reapplication

Reapplications may be necessary particularly in the event of high pest pressure. Reapply as necessary to achieve control using higher listed application rates as pest pressure and foliage area increases but make reapplications no more often than once every 7 days, not exceeding 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year.

**Restriction: (New York State only)** Make a single reapplication of BITHOR SC if there is renewed insect activity, but not sooner than two weeks after first application.

#### Turf Pest Application Use Rates

Use rates for BITHOR SC for turf pests are stated in fluid ounces of BITHOR SC per 1000 square feet and pints per acre. The application use rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet or 1.1 to 4.5 pints per acre, depending on the target pest. Rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed. However, applications of up to 1.65 fluid ounce per 1000 square feet or 4.5 pints per acre are permitted at the discretion of the applicator to control any pest.

**Restriction:** Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet of product per year.

#### Turf Application Use Rates

Use Rate Table for BITHOR SC for Turf Applications		
Use Rate	Fluid ounces BITHOR SC per 1,000 square feet (Range)	Pints BITHOR SC per acre (Range)
A	1.32⇒1.65	3.6⇒4.5
B	0.4⇒1.65	1.1⇒4.5

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Turf Pests Grouped by Use Rates

**Use Rate A:** Annual bluegrass weevil, *Aphodius* spp., Asiatic garden beetle, Black turfgrass ataenius, Black vine weevil, European chafer, European crane fly, Fruit fly, Green June beetle, Imported Fire Ant, Japanese beetle, Mole crickets, Northern masked chafer, Nuisance ants, Oriental beetle, *Phyllophaga* spp., Southern masked chafer, Ticks

**Use Rate B:** Armyworms, Banks grass mites, Billbugs, Chinch bugs, Centipedes, Crickets, Cutworms, Earwigs, Fleas, Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites, Pillbugs, Sod webworms, Sowbugs

#### Turf Application Volumes

Apply the indicated amount of BITHOR SC mixed in a volume of water sufficient to adequately distribute the active ingredient to the target area(s) and to wet all foliage.

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

#### Calculating Amounts of BITHOR SC to Mix for Turf Pests

To mix and apply any amount of BITHOR SC for turf pests based on number of square feet, determine:

$S = \# \text{ of Square feet of area to be treated} / 1000$  (for example  $5,500 \text{ sq. ft.} / 1000 = 5.5$ )

$R = \text{Applicable BITHOR SC Use Rate (fluid ounces per 1000 square feet) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Ounces BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

To mix and apply any amount of BITHOR SC for turf pests based on number of acres, determine:

$S = \# \text{ of acres of area to be treated} = \text{square feet of area to be treated} / 43,560$  (1 acre = 43,560 sq. ft.)

$R = \text{Applicable BITHOR SC Use Rate (pints per acre) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Pints BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

1 Pint = 16 fluid ounces

#### Application Instructions For Specific Turf Pests

**Annual Bluegrass Weevil (*Hyperodes*) adults:** Make applications timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*cornus florida*) is in full bloom. Consult your Cooperative



Extension Service for more specific information regarding application timing.

**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. The highest listed application rate may be necessary during periods of highest pest pressure if the grass is being maintained at a mowing height of 1 inch or greater.

**Billbug adults:** Make applications when adults first appear in the spring or when chewed or brown grass indicates damage. Degree day models have been developed to optimize application timing. Consult your Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of overwintered chinch bugs.

**Chinch Bugs:** Because they infest the base of grass plants, chinch bugs are often found in the thatch layer. Irrigation of the grass or high volume applications of solution can increase penetration of the solution to where the chinch bugs are located. Chinch bugs can be one of the most difficult turf pests to control. Higher listed application rates may be required to achieve effective control, particularly in the middle of the summer when both nymphs and adults are present.

**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, no sooner than 7 days after the first, may be necessary to achieve acceptable control.

**Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil.

**Imported Fire Ants:** Combine broadcast treatments to control newly invading ants and mound treatments to eliminate existing ant colonies. If the soil is not moist, irrigate before application or use a high volume application. Make broadcast applications at 1.65 fluid oz. per 1,000 square feet. Treat mounds by diluting 1/3 fluid oz. (2 teaspoons) of BITHOR SC per gallon of water and applying 1 to 2 gallons of finished spray per mound. Treat mounds with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. Treat a four foot diameter circle around the mound. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

**Mole Cricket adults:** Adult mole cricket control is difficult to attain because of continuous invasion during the early spring. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch when young nymphs are located near the soil surface. Control of larger, more damaging, nymphs later in the year may require using both higher labeled application rates and more frequent applications to maintain acceptable

control. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Treat the entire area where exposure to ticks may occur (not spot treatments). Use higher spray volumes within the specified rate range when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity.

#### **Restriction:**

Do not reapply more than once every seven days, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

**Deer ticks (*Ixodes* sp.)** have a complicated two year life cycle that involves four life stages. Make applications in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks commonly congregate along paths or roadways where humans are likely to be encountered. Apply as necessary from mid-spring to early fall to control their larvae, nymphs and adults.

## **FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS**

BITHOR SC, applied to foliage and broadcast on the soil, controls or suppresses a wide range of listed pests on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowering plants (only apply product prior to bloom or after all flower petals have fallen off) ground covers, bedding plants and foliage plants including plants in interior landscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control. Foliar applications of BITHOR SC also have local systemic activity against insect pests.

### Restrictions:

BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

Follow application restrictions on page [x] (note to reviewer – page number will be added to commercial label) to protect bees and other insect pollinators.

### Application Sites

For use on ornamental plants: trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior landscapes.

### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

### Foliar Application

#### Ornamental Application to Control Ants

BITHOR SC can be used to indirectly control ants when applied to control aphids, scale insects, mealybugs and other sucking insects on ornamentals thereby limiting the amount of honeydew available.

#### Foliar Application Volumes and Application Methods

BITHOR SC mixes readily with water and may be used in many types of application equipment. Mix required amount of product (from the Use Rate Table for BITHOR SC for Foliar Applications below) with the amount of water required to uniformly wet foliage and apply as desired dependent upon the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/ sticker is recommended. If concentrate or mist type spray equipment is used, use an equivalent amount of product on the area sprayed, as would be used in a dilute application. Begin treatments prior to establishment of high pest populations. Reapply as needed, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

#### Foliar Application Use Rates

Use rates for BITHOR SC for foliar application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 100 gallons of water. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 6.7 to 21.3 fluid ounces per 100 gallons, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed.

However, applications of up to 21.3 fluid ounces per 100 gallons are permitted at the discretion of the applicator to control any pest.

Use Rate Table for BITHOR SC for Foliar Applications		
Use Rate	Fluid ounces BITHOR SC per 100 gallons of water	Milliliters BITHOR SC per 100 gallons of water
A	21.3	630
B	10.7⇒21.3	315⇒630
C	6.7⇒21.3	200⇒630

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Ornamental Pests Controlled by Foliar Application

**Use Rate A:** Ants, Beet Armyworm, Black vine weevil adult, Broad mites, Budworms, Scale crawlers, Citrus thrips, Clover mites, Diaprepes (adults), European red mites, Fleabeetles, Fungus gnats (adults), Grasshoppers, Leafrollers, Mites, Mosquitoes, Orchid weevil, Pine needle scales (crawlers), Plant bugs, San Jose scale (crawlers), Spider Mites, Thrips, Tip moths, Twig borers, Wasps

**Use Rate B:** Bagworms, Cutworms, Fall webworms, Gypsy moth caterpillars, Leaf feeding caterpillars, Tent caterpillars

**Use Rate C:** Adelgids, Aphids, Japanese beetles, Lacebugs, Leafbeetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Mealybugs, Psyllids, Sawfly larvae, Thrips (suppression), Treehoppers, Whiteflies

#### Broadcast Application

##### Broadcast Application Volumes and Application Method

Mix required amount of product in a quantity of water sufficient to uniformly treat area. Use a minimum of 2 gallons of water per 1000 square feet. To achieve optimum control, irrigate treated area in order to incorporate treatment into upper level of soil.

#### Restrictions:

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet per year.

#### Broadcast Application Use Rates

Use rates for BITHOR SC for broadcast application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 1000 square feet. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher labeled application rates when maximum residual control is needed.

Use Rate Table for BITHOR SC for Broadcast Applications		
Use Rate	Fluid ounces BITHOR SC per 1000 square feet	Milliliters BITHOR SC per 1000 square feet
A	1.32⇒1.65	40⇒50
B	0.4⇒0.85	12⇒26

#### Ornamental Pests Controlled by Broadcast Application

**Use Rate A:** White grub larvae (such as Japanese beetle larvae, Chafers, *Phyllophaga* spp., Asiatic garden beetle, Oriental beetle), Imported Fire Ants, Nuisance Ants

**Use Rate B:** Centipedes, Crickets, Earwigs, Pillbugs, Sowbugs, Armyworms, Cutworms, Sod webworms

### SOIL INJECTION AND SOIL DRENCH FOR ORNAMENTAL PESTS

BITHOR SC, applied as a soil drench or soil injection, controls or suppresses a wide range of listed insects on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, foliage plants, ground covers and interior plantscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, make applications prior to anticipated pest infestation to achieve optimum levels of control.

Applications to trees for the control of existing borer infestations may not prevent the eventual loss of the tree due to existing damage already caused by the pest and stress to the tree caused by the pest infestation.

**Restrictions:** BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

#### Application Sites

For use on ornamental plants and non-bearing fruit and nut trees, shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior plantscapes.

#### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

#### Ornamental Pests Controlled by Soil Injection or Drench Application

Adelgids, Aphids, Armored scales (suppression), Black vine weevil larvae, Eucalyptus longhorned borer, Flatheaded borers (including bronze birch borer and alder borer), Japanese beetles, Lace bugs, Leaf beetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leaf miners, Mealybugs, Pine tip moth larvae, Psyllids, Royal palm bugs, Sawfly larvae, Soft scales, Thrips (suppression), White grub larvae, Whiteflies.

#### Soil Injection for Trees

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### Soil Injection Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Injection for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

D.B.H. = Diameter at Breast Height

D.B.H. is measured at 4 ½ feet from the ground.

#### Soil Injection Volumes and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply at a low pressure according to one of the two following methods. Make a minimum of 4 injection holes per tree. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

**Grid Injection:** Evenly space holes on 2.5 foot centers in a grid pattern in the soil beneath the tree's branches/foliage out to the tree's drip line.

**Basal Injection:** Evenly space injection holes around the base of the tree no more than 12 inches out from the tree.

#### Soil Drench for Trees

#### Soil Drench Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Drench for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

#### Soil Drench Volume and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be

adequately dispersed. Apply solution at a rate of no less than 10 gallons per 1000 square feet around the base of the tree directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier.

#### Soil Injection for Shrubs

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### Soil Injection Use Rate for Shrubs

Use Rate Table for BITHOR SC for Soil Injection for Shrubs
0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height

#### Soil Injection Volume and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply to individual plants using dosage indicated at a low pressure, making a minimum of 4 injection holes per shrub. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

#### Soil Drench for Shrubs

#### Soil Drench Use Rate for Shrubs

Use Rate Table for BITHOR SC for Soil Drench for Shrubs
0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height

#### Soil Drench Volumes and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be adequately dispersed, but at a rate no less than 10 gallons per 1000 square feet around the base of each shrub directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier

#### Soil Incorporation for Flowers and Groundcovers

Apply as a broadcast treatment and incorporate into the soil before planting. Application can also be made after the plants are established prior to bloom or after all petals have fallen off; in this case, best control is achieved if plants are irrigated after application.

#### Soil Incorporation Use Rate for Flowers and Groundcovers

Use Rate Table for BITHOR SC for Soil Incorporation for Flowers and Groundcovers
1.32 to 1.65 fluid ounces per 1000 square feet 40 to 50 milliliters per 1000 square feet

## PESTS INSIDE AND OUTSIDE OF STRUCTURES

### (OTHER THAN WOOD INFESTING INSECTS)

Bithor SC controls a wide range of nuisance pests inside and outside of structures and modes of transport. Bithor SC can be applied in and around any type of residential or commercial structure, building or mode of transport: non-food/non-feed areas of food/feed handling establishments. Permitted application sites include the interior and exterior of homes, apartments, commercial buildings, manufacturing establishments, office buildings, stores, food processing plants (non-food/non-feed areas), warehouses, schools, factories, hospitals, nursing homes, mobile and modular homes, vehicles and marine vessels.

Bithor SC will not stain or damage any surface that water alone will not stain or damage.

**Restriction:** Do not apply within aircraft cabins.

Follow application restrictions on page [x] (*note to reviewer – page number will be added to commercial label*) to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

#### Dilution of Bithor SC

Use rates for Bithor SC are expressed and mixed according to the percentage (%) concentration solution it forms when mixed in water as found in the table below.

Mixing Table for Bithor SC Inside and Outside of Structures			
Use Rate	% Bithor SC in water	Fluid ounces Bithor SC to add per gallon of water for desired %	Milliliters of Bithor SC to add per gallon of water for desired %
A	0.068%	0.89	26
B	0.135%	1.78	52

### PESTS OUTSIDE AND AROUND STRUCTURES

#### Pests Controlled\*

Ants (including Carpenter Ants), Armyworms, Bees (except Carpenter Bees), Biting Flies, Blue or Green Bottle Fly, Boxelder Bug, Centipedes, Chiggers, Chinch Bug, Clover Mites, Cluster Flies, Cockroaches, Crickets, Cutworms, Dichondra Flea Beetle, Earwigs, Elm Leaf Beetle, Firebrats, Fleas, Flesh Flies, Flies, Gnats, Grasshoppers, Ground Beetle, Hornets, Housefly, Japanese Beetle, Lady Beetles, Midges, Millipedes, Mole Crickets, Mosquitoes, Moths, Pillbugs, Scorpions, Silverfish, Sod Webworms, Sowbugs, Spider Mites, Spiders, Springtails, Stable Flies, Ticks, Wasps and Yellow Jackets.

\*Not approved for use on beetles, including Japanese Beetle in California.

#### Application Methods

Apply Bithor SC as a solution in the form of a general surface, spot, crack and crevice, void, pinstream or coarse spray to the structure or areas around the

structure where pests can enter the structure or where they have been seen or found or can find shelter. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

#### **Restrictions:**

Do not contact treated surfaces until they are dry.

Do not apply as a space spray.

Follow application restrictions on page [x] *(note to reviewer – page number will be added to commercial label)* to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not treat firewood.

#### **Application Use Rates and Volumes**

Select a Use Rate from the Bithor SC Mixing Table above. Use the 0.135% rate for severe infestations, faster knockdown or longer residual and for Fire Ants, Hornets, Wasps and Yellow Jackets.

Apply at a high enough volume to adequately wet the treated area without excessive dripping or runoff. Higher application volumes may be used if necessary to sufficiently wet vegetation and landscaping with the spray solution. Higher application volumes may also be used for severe infestations, faster knockdown or longer residual control. For high volume applications, Bithor SC may be diluted to lower concentrations by applying the same amount of Bithor SC in greater volumes of water.

#### **Re-Application**

Do not repeat treatments more often than once every 7-10 days. The best efficacy and longest residual control is achieved when the highest listed concentration is used.

#### **Application Locations**

Apply spray to the exterior surfaces of structures and to grounds, lawns, landscaping and plants. Can also be applied to any areas where pests congregate or have been seen.

#### **Perimeter Band Treatment**

To help prevent pest infestation of structures, create a treated zone or band on the structure, soil and vegetation around the entire perimeter of a structure. Apply solution to all surfaces within a band beginning 6 to 10 feet from the exterior foundation of the structure that extends back to the structure and then continues 2 to 3 feet up the exterior surface of the structure from the ground. Application volume will depend upon the nature of the surface being treated. Mulch areas, for example, require more volume and hard surface areas requiring less.

#### **Control of Specific Pests Outdoors**

##### **Ants (Nuisance ants including Carpenter Ants)**

**Outdoors:** To achieve the highest level of control, locate and directly treat ant nests. Apply solution to ant trails, around doors and windows and at points where

ants can be expected to forage or congregate. Apply to flowering plants (only apply product prior to bloom or after all flower petals have fallen off), shrubs and ornamental plant beds where ants may forage for food (such as honeydew produced by plant-sucking insects). It is recommended that shrubbery and other vegetation directly touching the structure be trimmed away.

**For Ant (including Fire Ant) Mounds:** Treat mounds and area within a 2 foot radius of the center of the mound with 1-2 gallons of 0.135% solution. When mounds exceed 12 inches in size use the higher solution. **Bees, Wasps, Hornets, and Yellow Jackets:** Always use the highest rate (0.135%). Spray nest openings in ground, in bushes and wherever insects may be nesting. Spray to the point of saturation with a pinstream application. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Boxelder Bug and other Occasional Invaders:** Apply a perimeter application directly to where insects have congregated at points of entry. It may be necessary to also treat trees.

**Centipedes, Earwigs, Millipedes, Pillbugs, Sowbugs, Springtails:** Thoroughly treat mulch areas. The reduction of moisture in mulch areas may also aid in control of these pests.

**House Flies and Cluster Flies:** Spray surfaces where flies may rest. For Cluster Flies, treat in late summer or fall before flies begin looking for winter shelter.

**Mosquitoes:** Apply solution to lawns and landscaping, under decks and to building foundations and other points where mosquitoes may rest. Refer to *FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS* section for mixing and applying large amounts of solution against mosquitoes.

**Fleas and Ticks:** Treat the entire area where insects could be present. Begin treatments in the spring. Insects may be re-introduced by host animals in the surrounding area. Retreatment, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year may be necessary to achieve and maintain control during periods of high pest pressure.

**Scorpions:** Treat around firewood (but not firewood) and other hiding places. Remove piles of material that may serve as hiding places. Apply a perimeter treatment.

#### **PESTS INSIDE STRUCTURES (OTHER THAN FOOD/FEED AREAS OF FOOD/FEED HANDLING ESTABLISHMENTS) INCLUDING MODES OF TRANSPORT**

##### **Pests Controlled\***

Ants (including Carpenter Ants), Bedbug, Bees (except Carpenter), Beetles (except wood infesting), Blue or Green Bottle Fly, Hide or Leather Beetle, Boxelder Bug, Carpet Beetles, Centipedes, Clothes Moth, Clover Mites, Cluster Fly, Cockroaches, Crickets, Dermestids, Earwigs, Elm leaf Beetle, Fleas, Firebrats, Flies, Gnats, Hornets, House fly, Lady Beetles, Midges, Millipedes, Mosquitoes, Moths, Pillbugs, Scorpions, Sowbugs, Silverfish, Spiders, Springtails, Ticks, Wasps and Yellow Jackets



\*Not approved for use on beetles, including Japanese Beetle in California.

#### **Application Preparation**

When treating in home food preparation and storage areas, cover all food preparation surfaces and utensils prior to beginning treatment. Thoroughly wash surfaces or items that cannot be covered or removed after treatment and before use. Remove food that cannot be covered. Disconnect fish tanks aerators and remove tanks or securely cover before application occurs.

**Restriction:** Do not allow people and pets to touch treated surfaces until they have dried.

#### **Application Use Rates**

Use a 0.068% or 0.135% solution of Bithor SC. Use the higher rate for severe infestations, faster knockdown or longer residual.

#### **Application Methods**

Apply Bithor SC as a solution in the form of a spot, crack and crevice, void, pinstream or coarse spray. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

**Restriction:** For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.

#### **Application Locations**

Apply to and around any areas pests or their evidence is seen or found, could hide or rest or could enter the premises including cracks and crevices, behind and under cabinets and appliances, around doors, windows and eaves, in attics and storage areas and around pipes and under appliances. Spot treat floor or rugs beneath furniture, in closets, and storage areas. Do not treat an area larger than 3 feet x 3 feet.

#### **Control of Specific Pests Indoors**

**Cockroaches, Crickets, Firebrats, Scorpions, Silverfish, Spiders, and Ticks:** Apply wherever these pests may hide, enter the structure or congregate such as cracks and crevices, baseboards, water pipe openings, around doors and windows, behind and under cabinets and appliances and within storage and attic areas.

**Bedbug:** To aid in control, apply to cracks and crevices wherever evidence of bedbugs has been found including within empty dressers and closets, on bed frames and box springs and behind high and low wall moldings and wallpaper edges. Not for use as a sole control agent against bedbugs. If evidence of bedbugs is found on or in mattresses, use only products approved for application to this item. Do not apply more often than once every 7-10 days.

#### **Restrictions:**

Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.

Remove all clothes and other articles from dressers or closets before application within them.

Do not apply to furniture or upholstery where prolonged contact with humans will occur.

**Boxelder Bug, Centipedes, Earwigs, Beetles, Millipedes, Pillbugs, Sowbugs:** Apply to points of pest entry into structure such as around windows and doors. Apply anywhere else pests may congregate or be located.

**Bees, Wasps, Hornets, Yellow-Jackets:** Always use the highest rate (0.135%) when treating bees, wasps, hornets and yellow-jackets. Apply solution to hiding and breeding places, contacting as many insects as possible. Best results are achieved when application is made in the evening when insects are at rest and to avoid stings. Spray to the point of saturation. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Ants (Nuisance ants including Carpenter Ants)**

**Indoors:** To achieve the highest level of control, locate and directly treat ant nests and ant trails. Apply solution in areas infested by or expected to be infested by ants such as on walls, tile, baseboards, under cabinets and around pipes.

#### **IMPORTANT READ BEFORE USE**

**NOTICE:** Read the entire Directions for Use, Conditions of Sale, Disclaimer of Warranties and Limitations of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

**CONDITIONS OF SALE:** The Directions for Use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond the control of ENSYSTEX IV, Inc., it is impossible for ENSYSTEX IV to eliminate all risks associated with the use of this product such as ineffectiveness or unintended consequences. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ENSYSTEX IV harmless for any claims relating to such factors.

**DISCLAIMER OF WARRANTIES:** Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the Directions for Use under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ENSYSTEX IV MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. Any warranties, express or implied, having been made are inapplicable if

this product has been used contrary to label instructions, under abnormal conditions or under conditions not reasonably foreseeable by (or beyond the control of) seller or ENSYSTEX IV, Inc., and buyer assumes the risk of any such use. No agent of ENSYSTEX IV, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein.

**LIMITATIONS OF LIABILITY:** To the extent permitted by law, ENSYSTEX IV shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ENSYSTEX IV AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ENSYSTEX IV, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

BITHOR is a registered trademark of ENSYSTEX IV, Inc.

Revised 23/15

EPA 2015020920150305

# Material Sent for Data Extraction

Reg. # 83923-2

Description: \_\_\_\_\_

☐ Material(s) Sent to Data Extraction Contractors:

☒ New Stamped Label Dated 2/9/2015

☐ Notification Dated \_\_\_\_\_

☐ New CSF(s) Dated \_\_\_\_\_

☐ Other: \_\_\_\_\_

☒ Decision #: 496 244

☐ Other Action/Comments: \_\_\_\_\_  
\_\_\_\_\_

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Melody Banks

Phone: 703 305 5413 Division: IVB3

Date: 2/11/2015





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

February 9, 2015

Ensystex IV, Inc.  
c/o Mr. Michael Kellogg, Agent  
Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> Street NW  
Gig Harbor, WA 98232

Subject: PRIA Label Amendment – Add Directions for use on Carpenter Ants  
and Update the First Aid Statements  
Product Name: Bithor SC  
EPA Registration Number: 83923-2  
Application Date: October 7, 2014  
Decision Number: 496244

Dear Mr. Kellogg:

The application referred to above, submitted under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable under FIFRA sec 3 (c)(5). You must submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Page 2 of 2  
EPA Reg. No. 83923-2  
Decision No. 496244

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Melody Banks by phone at (703) 305 5413, or via email at [Banks.Melody@epa.gov](mailto:Banks.Melody@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Venus Eagle', followed by a horizontal line.

Venus Eagle, Product Manager 1  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505P)

Enclosure: Copy of Stamped Accepted Label



## BITHOR SC

For control of listed pests indoors and outdoors in and around residential, commercial, industrial, institutional and public structures and buildings.

For control of listed insect pests of turfgrass, landscape ornamentals, shrubs, and ornamental trees and structures in lawns, landscapes, playgrounds, parks and athletic fields.

Active Ingredient:	By Wt.
Imidacloprid .....	5.0%
Bifenthrin* .....	4.0%
Other Ingredients: .....	91.0%
TOTAL: .....	100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

Contains 0.45 pounds of imidacloprid and 0.36 pounds of bifenthrin per gallon

EPA Reg. No. 83923-2 EPA Est. 81824-NC-001

**STOP – Read the label before use**

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

(PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.)

(TO THE USER: If you cannot read and understand English, do not use this product until the label has been fully explained to you.)

For product use information call 1-866-FOR-THOR (866-367-8467) or visit [www.for-thor.com](http://www.for-thor.com).

NET CONTENTS: Gallon(s)

Manufactured by:

**ENSYSTEX IV, Inc.**

2175 Village Drive, Fayetteville, NC 28304

### FIRST AID

If swallowed:	<ul style="list-style-type: none"><li>• Call poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>
If on skin or clothing:	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If in eyes:	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-(800)-369-4352 for emergency medical treatment information.

### NOTE TO PHYSICIAN

**Note To Physician:** No specific antidote is available. Treat the patient symptomatically. This product contains a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

### PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

### CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment:** Applicators and other handlers must wear long-sleeved shirt, long pants, shoes and socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Run-off may be hazardous to aquatic organisms in water adjacent to treated areas.

This product contains a chemical with properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when heavy rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies and drainage systems.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging in the treatment area.

#### PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators. Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar. Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator active plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>. Pesticide incidents (for example, bee kills) should immediately be reported to the state / tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at [beekill@epa.gov](mailto:beekill@epa.gov).

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See individual use sites for specific pollinator protection application restrictions. If none exist under the specific use site, for outdoor foliar applications, follow these application directions.



Do not apply BITHOR SC while bees are foraging. Do not apply BITHOR SC to plants that are flowering. Only apply after all flower petals have fallen off.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### RESTRICTIONS

- Do not allow people or pets on treated surfaces until the spray has dried.
- Do not water the treated areas to the point of run-off.
- Do not make applications during rain.
- Do not make applications directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.
- Do not use household utensils to measure BITHOR SC.
- For broadcast applications, do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per

application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year.

- For application to lawns, turf, vegetation or to the soil by injection or drench, do not exceed 0.4 lb of imidacloprid (7 pints of Bithor SC) per acre per year.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon
- Do not harvest or consume fruit or nuts from any tree that has been treated within 1 year (365 days).
- BITHOR SC is not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.
- BITHOR SC is not for use in commercial greenhouses, nurseries, or on grasses grown for seed, golf courses, turfgrass grown for sale (sod farms) or on commercial fruit and nut trees.
- Do not apply to turf that is frozen, waterlogged or is saturated with water. Turf in this condition will not allow the necessary vertical distribution of the active ingredient down into the soil.
- Do not apply within aircraft cabins.
- Do not apply in food/feed areas of food and feed handling establishments.
- Do not apply to furniture or upholstery where prolonged contact with humans will occur.
- Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.
- Remove or cover and disconnect aquariums during application.
- Do not apply a broadcast application to interior surfaces of living areas.
- Do not apply to pets, crops, sources of electricity or firewood.
- During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material, except for soil surfaces in crawlspaces.
- Wear protective clothing, unvented goggles, gloves and respirator when making an overhead application or when applying in poorly ventilated indoor areas.
- Do not allow dripping or runoff to occur during indoor applications.
- For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.
- Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.
- Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.
- Do not apply this product in nursing home or patient rooms or in any rooms while occupied by the elderly or infirmed.
- Do not apply in classrooms when they are in use.

- Do not apply when occupants are present in the immediate area in institutions such as health care facilities, libraries, schools, offices, etc.
- Do not apply in livestock buildings such as barns.
- Do not apply where electrical short circuits can occur.
- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not allow runoff or puddling of irrigation water following application.
- Do not apply by air.
- Do not apply by any type of irrigation system.

#### **Restrictions Applicable to New York State only:**

Do not apply BITHOR SC containing solutions to grass or turf within 100 feet of a body of water (lake, pond, river, stream, wetland or drainage ditch).

Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### **Additional Application Restrictions for Residential Outdoor Surface and Space Sprays:**

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

- (1) Applications to soil or vegetation, as listed on this label, around structures;
- (2) Applications to lawns, turf, and other vegetation, as listed on this label;
- (3) Applications to the side of a building, up to a maximum height of 3 feet above grade;
- (4) Applications to underside of eaves, soffits, doors or windows permanently protected from rainfall by a covering, overhang, awning or other structure;
- (5) Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch width;
- (6) Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other conditions that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, windows, door and eaves are limited to spot and crack-and-crevice applications only.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If container is leaking or if material is spilled for any reason or cause, carefully contain any spilled material to prevent non-target contamination. Do not walk through spilled material and dispose of as directed for pesticides below. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. Refer to *Precautionary Statements* on label for hazards associated with the handling of this material. In spill or leak incidents, keep unauthorized people away. You may contact ENSYSTEX IV for decontamination procedures or any other assistance that may be necessary at 1-866-367-8467 or contact Chemtrec at 1-800-424-9300.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## PRODUCT INFORMATION

BITHOR SC controls or suppresses a wide spectrum of insects and mites on turfgrass, trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants and pests in, at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports, cemeteries, lawns and interior landscapes. BITHOR SC mixes readily with water and other aqueous carriers.

Some insects can develop resistance to products used repeatedly for their control. Because the development of resistance by an insect to an insecticide cannot be predicted, the use of this product should be according to established resistance management strategies. Consult

your local or state pest management authorities for details.

If necessary, consult resources in horticulture in your area (such as your Cooperative Extension Service) to determine appropriate application timing and cultural practices to control different types of pests.

## APPLICATION FOR TURF PESTS

BITHOR SC can be used for the control of a wide range of listed pests of turfgrass. Because BITHOR SC's active ingredients have long lasting residual activity, applications for control of subsurface feeders can be made before the occurrence of egg laying activity. BITHOR SC's active ingredients also have sufficient knockdown and residual activity to provide remedial and residual control of surface feeding pests.

**Restrictions:** Do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year. Do not allow this product to contact plants in bloom while bees are foraging the treatment area. Not for use on commercial sod farms.

### Application Sites

Permitted sites: lawns, grounds and landscapes at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports and cemeteries.

### Application Timing

The active ingredients in BITHOR SC have sufficiently long-lasting residual activity that applications can be made prior to egg laying by the target pest(s). Optimum control of turf pests will be achieved when application is made prior to egg hatch followed by sufficient irrigation or rainfall to move the active ingredient through the thatch and down into the underlying soil. Applications can be timed based on past experiences at the site or in the area, current results of adult monitoring/trapping or other methods.

### Post Application Watering and Mowing

Do not mow turf or lawn area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected. Optimum control is achieved if irrigation or rainfall occurs within 24 hours after application. Uniformity of application may be adversely affected if turf is mowed prior to irrigation/rainfall occurring.

### Application Preparations

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use



by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

Because certain cultivars may be sensitive to the final spray solution, test the effects of applications of different rates and volumes of mixed solution on a small patch of a type of grass (with observations over one week to detect the occurrence of negative effects) before application of solutions to large areas of that type of grass.

#### Application Equipment and Methods

Apply BITHOR SC mixed in water (according to the table below) as a spray of uniform, coarse droplets at a pressure low enough to eliminate drift from the target area. Properly calibrated application equipment must be used to apply BITHOR SC. Check calibration periodically to ensure that equipment is working properly.

#### Reapplication

Reapplications may be necessary particularly in the event of high pest pressure. Reapply as necessary to achieve control using higher listed application rates as pest pressure and foliage area increases but make reapplications no more often than once every 7 days, not exceeding 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year.

**Restriction: (New York State only)** Make a single reapplication of BITHOR SC if there is renewed insect activity, but not sooner than two weeks after first application.

#### Turf Pest Application Use Rates

Use rates for BITHOR SC for turf pests are stated in fluid ounces of BITHOR SC per 1000 square feet and pints per acre. The application use rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet or 1.1 to 4.5 pints per acre, depending on the target pest. Rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed. However, applications of up to 1.65 fluid ounce per 1000 square feet or 4.5 pints per acre are permitted at the discretion of the applicator to control any pest.

**Restriction:** Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet of product per year.

#### Turf Application Use Rates

Use Rate Table for BITHOR SC for Turf Applications		
Use Rate	Fluid ounces BITHOR SC per 1,000 square feet (Range)	Pints BITHOR SC per acre (Range)
A	1.32⇒1.65	3.6⇒4.5
B	0.4⇒1.65	1.1⇒4.5

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Turf Pests Grouped by Use Rates

**Use Rate A:** Annual bluegrass weevil, *Aphodius* spp., Asiatic garden beetle, Black turfgrass ataenius, Black vine weevil, European chafer, European crane fly, Fruit fly, Green June beetle, Imported Fire Ant, Japanese beetle, Mole crickets, Northern masked chafer, Nuisance ants, Oriental beetle, *Phyllophaga* spp., Southern masked chafer, Ticks

**Use Rate B:** Armyworms, Banks grass mites, Billbugs, Chinch bugs, Centipedes, Crickets, Cutworms, Earwigs, Fleas, Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites, Pillbugs, Sod webworms, Sowbugs

#### Turf Application Volumes

Apply the indicated amount of BITHOR SC mixed in a volume of water sufficient to adequately distribute the active ingredient to the target area(s) and to wet all foliage.

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

#### Calculating Amounts of BITHOR SC to Mix for Turf Pests

To mix and apply any amount of BITHOR SC for turf pests based on number of square feet, determine:

$S = \# \text{ of Square feet of area to be treated} / 1000$  (for example 5,500 sq. ft. / 1000 = 5.5)

$R = \text{Applicable BITHOR SC Use Rate (fluid ounces per 1000 square feet) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Ounces BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

To mix and apply any amount of BITHOR SC for turf pests based on number of acres, determine:

$S = \# \text{ of acres of area to be treated} = \text{square feet of area to be treated} / 43,560$  (1 acre = 43,560 sq. ft.)

$R = \text{Applicable BITHOR SC Use Rate (pints per acre) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Pints BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

1 Pint = 16 fluid ounces

#### Application Instructions For Specific Turf Pests

**Annual Bluegrass Weevil (Hyperodes) adults:** Make applications timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*cornus florida*) is in full bloom. Consult your Cooperative

Extension Service for more specific information regarding application timing.

**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. The highest listed application rate may be necessary during periods of highest pest pressure if the grass is being maintained at a mowing height of 1 inch or greater.

**Billbug adults:** Make applications when adults first appear in the spring or when chewed or brown grass indicates damage. Degree day models have been developed to optimize application timing. Consult your Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of overwintered chinch bugs.

**Chinch Bugs:** Because they infest the base of grass plants, chinch bugs are often found in the thatch layer. Irrigation of the grass or high volume applications of solution can increase penetration of the solution to where the chinch bugs are located. Chinch bugs can be one of the most difficult turf pests to control. Higher listed application rates may be required to achieve effective control, particularly in the middle of the summer when both nymphs and adults are present.

**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, no sooner than 7 days after the first, may be necessary to achieve acceptable control.

**Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil.

**Imported Fire Ants:** Combine broadcast treatments to control newly invading ants and mound treatments to eliminate existing ant colonies. If the soil is not moist, irrigate before application or use a high volume application. Make broadcast applications at 1.65 fluid oz. per 1,000 square feet. Treat mounds by diluting 1/3 fluid oz. (2 teaspoons) of BITHOR SC per gallon of water and applying 1 to 2 gallons of finished spray per mound. Treat mounds with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. Treat a four foot diameter circle around the mound. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

**Mole Cricket adults:** Adult mole cricket control is difficult to attain because of continuous invasion during the early spring. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch when young nymphs are located near the soil surface. Control of larger, more damaging, nymphs later in the year may require using both higher labeled application rates and more frequent applications to maintain acceptable

control. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Treat the entire area where exposure to ticks may occur (not spot treatments). Use higher spray volumes within the specified rate range when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity.

#### **Restriction:**

Do not reapply more than once every seven days, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

**Deer ticks (*Ixodes* sp.)** have a complicated two year life cycle that involves four life stages. Make applications in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks commonly congregate along paths or roadways where humans are likely to be encountered. Apply as necessary from mid-spring to early fall to control their larvae, nymphs and adults.

## **FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS**

BITHOR SC, applied to foliage and broadcast on the soil, controls or suppresses a wide range of listed pests on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowering plants (only apply product prior to bloom or after all flower petals have fallen off) ground covers, bedding plants and foliage plants including plants in interior landscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control. Foliar applications of BITHOR SC also have local systemic activity against insect pests.



### Restrictions:

BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

Follow application restrictions on page [x] (note to reviewer – page number will be added to commercial label) to protect bees and other insect pollinators.

### Application Sites

For use on ornamental plants: trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior landscapes.

### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

### Foliar Application

#### Ornamental Application to Control Ants

BITHOR SC can be used to indirectly control ants when applied to control aphids, scale insects, mealybugs and other sucking insects on ornamentals thereby limiting the amount of honeydew available.

#### Foliar Application Volumes and Application Methods

BITHOR SC mixes readily with water and may be used in many types of application equipment. Mix required amount of product (from the Use Rate Table for BITHOR SC for Foliar Applications below) with the amount of water required to uniformly wet foliage and apply as desired dependent upon the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/ sticker is recommended. If concentrate or mist type spray equipment is used, use an equivalent amount of product on the area sprayed, as would be used in a dilute application. Begin treatments prior to establishment of high pest populations. Reapply as needed, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

#### Foliar Application Use Rates

Use rates for BITHOR SC for foliar application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 100 gallons of water. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 6.7 to 21.3 fluid ounces per 100 gallons, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed.

However, applications of up to 21.3 fluid ounces per 100 gallons are permitted at the discretion of the applicator to control any pest.

Use Rate Table for BITHOR SC for Foliar Applications		
Use Rate	Fluid ounces BITHOR SC per 100 gallons of water	Milliliters BITHOR SC per 100 gallons of water
A	21.3	630
B	10.7→21.3	315→630
C	6.7→21.3	200→630

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Ornamental Pests Controlled by Foliar Application

**Use Rate A:** Ants, Beet Armyworm, Black vine weevil adult, Broad mites, Budworms, Scale crawlers, Citrus thrips, Clover mites, Diaprepes (adults), European red mites, Fleabeetles, Fungus gnats (adults), Grasshoppers, Leafrollers, Mites, Mosquitoes, Orchid weevil, Pine needle scales (crawlers), Plant bugs, San Jose scale (crawlers), Spider Mites, Thrips, Tip moths, Twig borers, Wasps

**Use Rate B:** Bagworms, Cutworms, Fall webworms, Gypsy moth caterpillars, Leaf feeding caterpillars, Tent caterpillars

**Use Rate C:** Adelgids, Aphids, Japanese beetles, Lacebugs, Leafbeetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Mealybugs, Psyllids, Sawfly larvae, Thrips (suppression), Treehoppers, Whiteflies

#### Broadcast Application

##### Broadcast Application Volumes and Application Method

Mix required amount of product in a quantity of water sufficient to uniformly treat area. Use a minimum of 2 gallons of water per 1000 square feet. To achieve optimum control, irrigate treated area in order to incorporate treatment into upper level of soil.

#### Restrictions:

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet per year.

#### Broadcast Application Use Rates

Use rates for BITHOR SC for broadcast application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 1000 square feet. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher labeled application rates when maximum residual control is needed.

Use Rate Table for BITHOR SC for Broadcast Applications		
Use Rate	Fluid ounces BITHOR SC per 1000 square feet	Milliliters BITHOR SC per 1000 square feet
A	1.32⇒1.65	40⇒50
B	0.4⇒0.85	12⇒26

#### Ornamental Pests Controlled by Broadcast Application

**Use Rate A:** White grub larvae (such as Japanese beetle larvae, Chafers, *Phyllophaga* spp., Asiatic garden beetle, Oriental beetle), Imported Fire Ants, Nuisance Ants

**Use Rate B:** Centipedes, Crickets, Earwigs, Pillbugs, Sowbugs, Armyworms, Cutworms, Sod webworms

### SOIL INJECTION AND SOIL DRENCH FOR ORNAMENTAL PESTS

BITHOR SC, applied as a soil drench or soil injection, controls or suppresses a wide range of listed insects on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, foliage plants, ground covers and interior plantscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, make applications prior to anticipated pest infestation to achieve optimum levels of control.

Applications to trees for the control of existing borer infestations may not prevent the eventual loss of the tree due to existing damage already caused by the pest and stress to the tree caused by the pest infestation.

**Restrictions:** BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

#### Application Sites

For use on ornamental plants and non-bearing fruit and nut trees, shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior plantscapes.

#### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

#### Ornamental Pests Controlled by Soil Injection or Drench Application

Adelgids, Aphids, Armored scales (suppression), Black vine weevil larvae, Eucalyptus longhorned borer, Flatheaded borers (including bronze birch borer and alder borer), Japanese beetles, Lace bugs, Leaf beetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leaf miners, Mealybugs, Pine tip moth larvae, Psyllids, Royal palm bugs, Sawfly larvae, Soft scales, Thrips (suppression), White grub larvae, Whiteflies.

#### Soil Injection for Trees

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### Soil Injection Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Injection for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

D.B.H. = Diameter at Breast Height

D.B.H. is measured at 4 ½ feet from the ground.

#### Soil Injection Volumes and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply at a low pressure according to one of the two following methods. Make a minimum of 4 injection holes per tree. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

**Grid Injection:** Evenly space holes on 2.5 foot centers in a grid pattern in the soil beneath the tree's branches/foliage out to the tree's drip line.

**Basal Injection:** Evenly space injection holes around the base of the tree no more than 12 inches out from the tree.

#### Soil Drench for Trees

#### Soil Drench Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Drench for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

#### Soil Drench Volume and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be

adequately dispersed. Apply solution at a rate of no less than 10 gallons per 1000 square feet around the base of the tree directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier.

#### Soil Injection for Shrubs

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### Soil Injection Use Rate for Shrubs

Use Rate Table for BITHOR SC for Soil Injection for Shrubs
0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height

#### Soil Injection Volume and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply to individual plants using dosage indicated at a low pressure, making a minimum of 4 injection holes per shrub. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

#### Soil Drench for Shrubs

#### Soil Drench Use Rate for Shrubs

Use Rate Table for BITHOR SC for Soil Drench for Shrubs
0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height

#### Soil Drench Volumes and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be adequately dispersed, but at a rate no less than 10 gallons per 1000 square feet around the base of each shrub directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier

#### Soil Incorporation for Flowers and Groundcovers

Apply as a broadcast treatment and incorporate into the soil before planting. Application can also be made after the plants are established prior to bloom or after all petals have fallen off; in this case, best control is achieved if plants are irrigated after application.

#### Soil Incorporation Use Rate for Flowers and Groundcovers

Use Rate Table for BITHOR SC for Soil Incorporation for Flowers and Groundcovers
1.32 to 1.65 fluid ounces per 1000 square feet 40 to 50 milliliters per 1000 square feet

## PESTS INSIDE AND OUTSIDE OF STRUCTURES

### (OTHER THAN WOOD INFESTING INSECTS)

Bithor SC controls a wide range of nuisance pests inside and outside of structures and modes of transport. Bithor SC can be applied in and around any type of residential or commercial structure, building or mode of transport: non-food/non-feed areas of food/feed handling establishments. Permitted application sites include the interior and exterior of homes, apartments, commercial buildings, manufacturing establishments, office buildings, stores, food processing plants (non-food/non-feed areas), warehouses, schools, factories, hospitals, nursing homes, mobile and modular homes, vehicles and marine vessels.

Bithor SC will not stain or damage any surface that water alone will not stain or damage.

**Restriction:** Do not apply within aircraft cabins.

Follow application restrictions on page [x] (*note to reviewer – page number will be added to commercial label*) to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

#### Dilution of Bithor SC

Use rates for Bithor SC are expressed and mixed according to the percentage (%) concentration solution it forms when mixed in water as found in the table below.

Mixing Table for Bithor SC Inside and Outside of Structures			
Use Rate	% Bithor SC in water	Fluid ounces Bithor SC to add per gallon of water for desired %	Milliliters of Bithor SC to add per gallon of water for desired %
A	0.068%	0.89	26
B	0.135%	1.78	52

## PESTS OUTSIDE AND AROUND STRUCTURES

### Pests Controlled

Ants (including Carpenter Ants), Armyworms, Bees (except Carpenter Bees), Biting Flies, Blue or Green Bottle Fly, Boxelder Bug, Centipedes, Chiggers, Chinch Bug, Clover Mites, Cluster Flies, Cockroaches, Crickets, Cutworms, Dichondra Flea Beetle, Earwigs, Elm Leaf Beetle, Firebrats, Fleas, Flesh Flies, Flies, Gnats, Grasshoppers, Ground Beetle, Hornets, Housefly, Japanese Beetle, Lady Beetles, Midges, Millipedes, Mole Crickets, Mosquitoes, Moths, Pillbugs, Scorpions, Silverfish, Sod Webworms, Sowbugs, Spider Mites, Spiders, Springtails, Stable Flies, Ticks, Wasps and Yellow Jackets.

### Application Methods

Apply Bithor SC as a solution in the form of a general surface, spot, crack and crevice, void, pinstream or coarse spray to the structure or areas around the structure where pests can enter the structure or where

they have been seen or found or can find shelter. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

#### **Restrictions:**

Do not contact treated surfaces until they are dry.

Do not apply as a space spray.

Follow application restrictions on page [x] (*note to reviewer – page number will be added to commercial label*) to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not treat firewood.

#### **Application Use Rates and Volumes**

Select a Use Rate from the Bithor SC Mixing Table above. Use the 0.135% rate for severe infestations, faster knockdown or longer residual and for Fire Ants, Hornets, Wasps and Yellow Jackets.

Apply at a high enough volume to adequately wet the treated area without excessive dripping or runoff. Higher application volumes may be used if necessary to sufficiently wet vegetation and landscaping with the spray solution. Higher application volumes may also be used for severe infestations, faster knockdown or longer residual control. For high volume applications, Bithor SC may be diluted to lower concentrations by applying the same amount of Bithor SC in greater volumes of water.

#### **Re-Application**

Do not repeat treatments more often than once every 7-10 days. The best efficacy and longest residual control is achieved when the highest listed concentration is used.

#### **Application Locations**

Apply spray to the exterior surfaces of structures and to grounds, lawns, landscaping and plants. Can also be applied to any areas where pests congregate or have been seen.

#### **Perimeter Band Treatment**

To help prevent pest infestation of structures, create a treated zone or band on the structure, soil and vegetation around the entire perimeter of a structure. Apply solution to all surfaces within a band beginning 6 to 10 feet from the exterior foundation of the structure that extends back to the structure and then continues 2 to 3 feet up the exterior surface of the structure from the ground. Application volume will depend upon the nature of the surface being treated. Mulch areas, for example, require more volume and hard surface areas requiring less.

#### **Control of Specific Pests Outdoors**

##### **Ants (Nuisance ants including Carpenter Ants)**

**Outdoors:** To achieve the highest level of control, locate and directly treat ant nests. Apply solution to ant trails, around doors and windows and at points where ants can be expected to forage or congregate. Apply to

flowering plants (only apply product prior to bloom or after all flower petals have fallen off), shrubs and ornamental plant beds where ants may forage for food (such as honeydew produced by plant-sucking insects). It is recommended that shrubbery and other vegetation directly touching the structure be trimmed away.

**For Ant (including Fire Ant) Mounds:** Treat mounds and area within a 2 foot radius of the center of the mound with 1-2 gallons of 0.135% solution. When mounds exceed 12 inches in size use the higher solution.

**Bees, Wasps, Hornets, and Yellow Jackets:** Always use the highest rate (0.135%). Spray nest openings in ground, in bushes and wherever insects may be nesting. Spray to the point of saturation with a pinstream application. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Boxelder Bug and other Occasional Invaders:** Apply a perimeter application directly to where insects have congregated at points of entry. It may be necessary to also treat trees.

**Centipedes, Earwigs, Millipedes, Pillbugs, Sowbugs, Springtails:** Thoroughly treat mulch areas. The reduction of moisture in mulch areas may also aid in control of these pests.

**House Flies and Cluster Flies:** Spray surfaces where flies may rest. For Cluster Flies, treat in late summer or fall before flies begin looking for winter shelter.

**Mosquitoes:** Apply solution to lawns and landscaping, under decks and to building foundations and other points where mosquitoes may rest. Refer to *FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS* section for mixing and applying large amounts of solution against mosquitoes.

**Fleas and Ticks:** Treat the entire area where insects could be present. Begin treatments in the spring. Insects may be re-introduced by host animals in the surrounding area. Retreatment, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year may be necessary to achieve and maintain control during periods of high pest pressure.

**Scorpions:** Treat around firewood (but not firewood) and other hiding places. Remove piles of material that may serve as hiding places. Apply a perimeter treatment.

#### **PESTS INSIDE STRUCTURES (OTHER THAN FOOD/FEED AREAS OF FOOD/FEED HANDLING ESTABLISHMENTS) INCLUDING MODES OF TRANSPORT**

##### **Pests Controlled**

Ants (including Carpenter Ants), Bedbug, Bees (except Carpenter), Beetles (except wood infesting), Blue or Green Bottle Fly, Hide or Leather Beetle, Boxelder Bug, Carpet Beetles, Centipedes, Clothes Moth, Clover Mites, Cluster Fly, Cockroaches, Crickets, Dermestids, Earwigs, Elm leaf Beetle, Fleas, Firebrats, Flies, Gnats, Hornets, House fly, Lady Beetles, Midges, Millipedes, Mosquitoes, Moths, Pillbugs, Scorpions, Sowbugs, Silverfish, Spiders, Springtails, Ticks, Wasps and Yellow Jackets

## Application Preparation

When treating in home food preparation and storage areas, cover all food preparation surfaces and utensils prior to beginning treatment. Thoroughly wash surfaces or items that cannot be covered or removed after treatment and before use. Remove food that cannot be covered. Disconnect fish tanks aerators and remove tanks or securely cover before application occurs.

**Restriction:** Do not allow people and pets to touch treated surfaces until they have dried.

## Application Use Rates

Use a 0.068% or 0.135% solution of Bithor SC. Use the higher rate for severe infestations, faster knockdown or longer residual.

## Application Methods

Apply Bithor SC as a solution in the form of a spot, crack and crevice, void, pinstream or coarse spray. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

**Restriction:** For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.

## Application Locations

Apply to and around any areas pests or their evidence is seen or found, could hide or rest or could enter the premises including cracks and crevices, behind and under cabinets and appliances, around doors, windows and eaves, in attics and storage areas and around pipes and under appliances. Spot treat floor or rugs beneath furniture, in closets, and storage areas. Do not treat an area larger than 3 feet x 3 feet.

## Control of Specific Pests Indoors

**Cockroaches, Crickets, Firebrats, Scorpions, Silverfish, Spiders, and Ticks:** Apply wherever these pests may hide, enter the structure or congregate such as cracks and crevices, baseboards, water pipe openings, around doors and windows, behind and under cabinets and appliances and within storage and attic areas.

**Bedbug:** To aid in control, apply to cracks and crevices wherever evidence of bedbugs has been found including within empty dressers and closets, on bed frames and box springs and behind high and low wall moldings and wallpaper edges. Not for use as a sole control agent against bedbugs. If evidence of bedbugs is found on or in mattresses, use only products approved for application to this item. Do not apply more often than once every 7-10 days.

## Restrictions:

Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.

Remove all clothes and other articles from dressers or closets before application within them.

Do not apply to furniture or upholstery where prolonged contact with humans will occur.

**Boxelder Bug, Centipedes, Earwigs, Beetles, Millipedes, Pillbugs, Sowbugs:** Apply to points of pest entry into structure such as around windows and doors. Apply anywhere else pests may congregate or be located.

**Bees, Wasps, Hornets, Yellow-Jackets:** Always use the highest rate (0.135%) when treating bees, wasps, hornets and yellow-jackets. Apply solution to hiding and breeding places, contacting as many insects as possible. Best results are achieved when application is made in the evening when insects are at rest and to avoid stings. Spray to the point of saturation. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Ants (Nuisance ants including Carpenter Ants) Indoors:** To achieve the highest level of control, locate and directly treat ant nests and ant trails. Apply solution in areas infested by or expected to be infested by ants such as on walls, tile, baseboards, under cabinets and around pipes.

## IMPORTANT READ BEFORE USE

**NOTICE:** Read the entire Directions for Use, Conditions of Sale, Disclaimer of Warranties and Limitations of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

**CONDITIONS OF SALE:** The Directions for Use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond the control of ENSYSTEX IV, Inc., it is impossible for ENSYSTEX IV to eliminate all risks associated with the use of this product such as ineffectiveness or unintended consequences. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ENSYSTEX IV harmless for any claims relating to such factors.

**DISCLAIMER OF WARRANTIES:** Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the Directions for Use under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ENSYSTEX IV MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, under abnormal conditions or under conditions not

reasonably foreseeable by (or beyond the control of) seller or ENSYSTEX IV, Inc., and buyer assumes the risk of any such use. No agent of ENSYSTEX IV, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein.

**LIMITATIONS OF LIABILITY:** To the extent permitted by law, ENSYSTEX IV shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ENSYSTEX IV AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ENSYSTEX IV, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

BITHOR is a registered trademark of ENSYSTEX IV, Inc.  
Revised 2/15

[EPA approval date]





# BITHOR SC

For control of listed pests indoors and outdoors in and around residential, commercial, industrial, institutional and public structures and buildings.

For control of listed insect pests of turfgrass, landscape ornamentals, shrubs, and ornamental trees and structures in lawns, landscapes, playgrounds, parks and athletic fields.

Active Ingredient:	By Wt.
Imidacloprid .....	5.0%
Bifenthrin* .....	4.0%
Other Ingredients: .....	91.0%
<b>TOTAL:</b> .....	100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum  
Contains 0.45 pounds of imidacloprid and 0.36 pounds of bifenthrin per gallon

EPA Reg. No. 83923-2 EPA Est. 81824-NC-001

**STOP – Read the label before use**

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

(PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.)

(TO THE USER: If you cannot read and understand English, do not use this product until the label has been fully explained to you.)

For product use information call 1-866-FOR-THOR (866-367-8467) or visit [www.for-thor.com](http://www.for-thor.com).

**NET CONTENTS:** Gallon(s)

**Manufactured by:**

**ENSYSTEX IV, Inc.**

2175 Village Drive, Fayetteville, NC 28304

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
If on skin or clothing:	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If in eyes:	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-(800)-369-4352 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
<b>Note To Physician:</b> No specific antidote is available. Treat the patient symptomatically. This product contains a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.	

## PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

## CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, ~~or~~ using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment:** Applicators and other handlers must wear long-sleeved shirt, long pants, shoes and socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations:** Wash hands before eating, drinking, chewing gum, using tobacco or using

the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Run-off may be hazardous to aquatic organisms in water adjacent to treated areas.

This product contains a chemical with properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when heavy rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies and drainage systems.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging in the treatment area.

### PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators. Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging

on pollinator active plants around the application site.

- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>. Pesticide incidents (for example, bee kills) should immediately be reported to the state / tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at [beekill@epa.gov](mailto:beekill@epa.gov).

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See individual use sites for specific pollinator protection application restrictions. If none exist under the specific use site, for outdoor foliar applications, follow these application directions.



Do not apply BITHOR SC while bees are foraging. Do not apply BITHOR SC to plants that are flowering. Only apply after all flower petals have fallen off.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### RESTRICTIONS

- Do not allow people or pets on treated surfaces until the spray has dried.
- Do not water the treated areas to the point of run-off.
- Do not make applications during rain.
- Do not make applications directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.
- Do not use household utensils to measure BITHOR SC.
- For broadcast applications, do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin)



per acre per year or 3.3 fluid ounces per 1000 square feet per year.

- For application to lawns, turf, vegetation or to the soil by injection or drench, do not exceed 0.4 lb of imidacloprid (7 pints of Bithor SC) per acre per year.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon
- Do not harvest or consume fruit or nuts from any tree that has been treated within 1 year (365 days).
- BITHOR SC is not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.
- BITHOR SC is not for use in commercial greenhouses, nurseries, or on grasses grown for seed, golf courses, turfgrass grown for sale (sod farms) or on commercial fruit and nut trees.
- Do not apply to turf that is frozen, waterlogged or is saturated with water. Turf in this condition will not allow the necessary vertical distribution of the active ingredient down into the soil.
- Do not apply within aircraft cabins.
- Do not apply in food/feed areas of food and feed handling establishments.
- Do not apply to furniture or upholstery where prolonged contact with humans will occur.
- Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.
- Remove or cover and disconnect aquariums during application.
- Do not apply a broadcast application to interior surfaces of living areas.
- Do not apply to pets, crops, sources of electricity or firewood.
- During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material, except for soil surfaces in crawlspaces.
- Wear protective clothing, unvented goggles, gloves and respirator when making an overhead application or when applying in poorly ventilated indoor areas.
- Do not allow dripping or runoff to occur during indoor applications.
- For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.
- Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.
- Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.
- Do not apply this product in nursing home or patient rooms or in any rooms while occupied by the elderly or infirmed.
- Do not apply in classrooms when they are in use.
- Do not apply when occupants are present in the immediate area in institutions such as health care facilities, libraries, schools, offices, etc.
- Do not apply in livestock buildings such as barns.

- Do not apply where electrical short circuits can occur.
- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not allow runoff or puddling of irrigation water following application.
- Do not apply by air.
- Do not apply by any type of irrigation system.

#### **Restrictions Applicable to New York State only:**

Do not apply BITHOR SC containing solutions to grass or turf within 100 feet of a body of water (lake, pond, river, stream, wetland or drainage ditch).

Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### **Additional Application Restrictions for Residential Outdoor Surface and Space Sprays:**

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

- (1) Applications to soil or vegetation, as listed on this label, around structures;
- (2) Applications to lawns, turf, and other vegetation, as listed on this label;
- (3) Applications to the side of a building, up to a maximum height of 3 feet above grade;
- (4) Applications to underside of eaves, soffits, doors or windows permanently protected from rainfall by a covering, overhang, awning or other structure;
- (5) Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch width;
- (6) Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other conditions that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, windows, door and eaves are limited to spot and crack-and-crevice applications only.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If container is leaking or if material is spilled for any reason or cause, carefully contain any spilled material to prevent non-target contamination. Do not walk through spilled material and dispose of as directed for pesticides below. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. Refer to *Precautionary Statements* on label for hazards associated with the handling of this material. In spill or leak incidents, keep unauthorized people away. You may contact ENSYSTEX IV for decontamination procedures or any other assistance that may be necessary at 1-866-367-8467 or contact Chemtrec at 1-800-424-9300.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## PRODUCT INFORMATION

BITHOR SC controls or suppresses a wide spectrum of insects and mites on turfgrass, trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants and pests in, at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports, cemeteries, lawns and interior landscapes. BITHOR SC mixes readily with water and other aqueous carriers.

Some insects can develop resistance to products used repeatedly for their control. Because the development of resistance by an insect to an insecticide cannot be predicted, the use of this product should be according to established resistance management strategies. Consult

your local or state pest management authorities for details.

If necessary, consult resources in horticulture in your area (such as your Cooperative Extension Service) to determine appropriate application timing and cultural practices to control different types of pests.

## APPLICATION FOR TURF PESTS

BITHOR SC can be used for the control of a wide range of listed pests of turfgrass. Because BITHOR SC's active ingredients have long lasting residual activity, applications for control of subsurface feeders can be made before the occurrence of egg laying activity. BITHOR SC's active ingredients also have sufficient knockdown and residual activity to provide remedial and residual control of surface feeding pests.

**Restrictions:** Do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.2 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per application. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year. Do not allow this product to contact plants in bloom while bees are foraging the treatment area. Not for use on commercial sod farms.

### Application Sites

Permitted sites: lawns, grounds and landscapes at and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports and cemeteries.

### Application Timing

The active ingredients in BITHOR SC have sufficiently long-lasting residual activity that applications can be made prior to egg laying by the target pest(s). Optimum control of turf pests will be achieved when application is made prior to egg hatch followed by sufficient irrigation or rainfall to move the active ingredient through the thatch and down into the underlying soil. Applications can be timed based on past experiences at the site or in the area, current results of adult monitoring/trapping or other methods.

### Post Application Watering and Mowing

Do not mow turf or lawn area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected. Optimum control is achieved if irrigation or rainfall occurs within 24 hours after application. Uniformity of application may be adversely affected if turf is mowed prior to irrigation/rainfall occurring.

### Application Preparations

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use

by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

Because certain cultivars may be sensitive to the final spray solution, test the effects of applications of different rates and volumes of mixed solution on a small patch of a type of grass (with observations over one week to detect the occurrence of negative effects) before application of solutions to large areas of that type of grass.

#### Application Equipment and Methods

Apply BITHOR SC mixed in water (according to the table below) as a spray of uniform, coarse droplets at a pressure low enough to eliminate drift from the target area. Properly calibrated application equipment must be used to apply BITHOR SC. Check calibration periodically to ensure that equipment is working properly.

#### Reapplication

Reapplications may be necessary particularly in the event of high pest pressure. Reapply as necessary to achieve control using higher listed application rates as pest pressure and foliage area increases but make reapplications no more often than once every 7 days, not exceeding 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet per year.

**Restriction: (New York State only)** Make a single reapplication of BITHOR SC if there is renewed insect activity, but not sooner than two weeks after first application.

#### Turf Pest Application Use Rates

Use rates for BITHOR SC for turf pests are stated in fluid ounces of BITHOR SC per 1000 square feet and pints per acre. The application use rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet or 1.1 to 4.5 pints per acre, depending on the target pest. Rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed. However, applications of up to 1.65 fluid ounce per 1000 square feet or 4.5 pints per acre are permitted at the discretion of the applicator to control any pest.

**Restriction:** Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.4 lb bifenthrin) per acre per year or 3.3 fluid ounces per 1000 square feet of product per year.

#### Turf Application Use Rates

Use Rate Table for BITHOR SC for Turf Applications		
Use Rate	Fluid ounces BITHOR SC per 1,000 square feet (Range)	Pints BITHOR SC per acre (Range)
A	1.32⇒1.65	3.6⇒4.5
B	0.4⇒1.65	1.1⇒4.5

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Turf Pests Grouped by Use Rates

**Use Rate A:** Annual bluegrass weevil, *Aphodius* spp., Asiatic garden beetle, Black turfgrass ataenius, Black vine weevil, European chafer, European crane fly, Fruit fly, Green June beetle, Imported Fire Ant, Japanese beetle, Mole crickets, Northern masked chafer, Nuisance ants, Oriental beetle, *Phyllophaga* spp., Southern masked chafer, Ticks

**Use Rate B:** Armyworms, Banks grass mites, Billbugs, Chinch bugs, Centipedes, Crickets, Cutworms, Earwigs, Fleas, Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites, Pillbugs, Sod webworms, Sowbugs

#### Turf Application Volumes

Apply the indicated amount of BITHOR SC mixed in a volume of water sufficient to adequately distribute the active ingredient to the target area(s) and to wet all foliage.

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

#### Calculating Amounts of BITHOR SC to Mix for Turf Pests

To mix and apply any amount of BITHOR SC for turf pests based on number of square feet, determine:

$S = \# \text{ of Square feet of area to be treated} / 1000$  (for example  $5,500 \text{ sq. ft.} / 1000 = 5.5$ )

$R = \text{Applicable BITHOR SC Use Rate (fluid ounces per 1000 square feet) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Ounces BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

To mix and apply any amount of BITHOR SC for turf pests based on number of acres, determine:

$S = \# \text{ of acres of area to be treated} = \text{square feet of area to be treated} / 43,560$  (1 acre = 43,560 sq. ft.)

$R = \text{Applicable BITHOR SC Use Rate (pints per acre) for the target pest(s) from the Use Rate Table for BITHOR SC for Turf Applications.}$  If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC to mix for turf pests as follows:

Pints BITHOR SC to use =  $S \times R$

Mix this amount of BITHOR SC in the amount of water needed to make the application.

1 Pint = 16 fluid ounces

#### Application Instructions For Specific Turf Pests

**Annual Bluegrass Weevil (Hyperodes) adults:** Make applications timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*cornus florida*) is in full bloom. Consult your Cooperative

Extension Service for more specific information regarding application timing.

**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. The highest listed application rate may be necessary during periods of highest pest pressure if the grass is being maintained at a mowing height of 1 inch or greater.

**Billbug adults:** Make applications when adults first appear in the spring or when chewed or brown grass indicates damage. Degree day models have been developed to optimize application timing. Consult your Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of overwintered chinch bugs.

**Chinch Bugs:** Because they infest the base of grass plants, chinch bugs are often found in the thatch layer. Irrigation of the grass or high volume applications of solution can increase penetration of the solution to where the chinch bugs are located. Chinch bugs can be one of the most difficult turf pests to control. Higher listed application rates may be required to achieve effective control, particularly in the middle of the summer when both nymphs and adults are present.

**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, no sooner than 7 days after the first, may be necessary to achieve acceptable control.

**Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil.

**Imported Fire Ants:** Combine broadcast treatments to control newly invading ants and mound treatments to eliminate existing ant colonies. If the soil is not moist, irrigate before application or use a high volume application. Make broadcast applications at 1.65 fluid oz. per 1,000 square feet. Treat mounds by diluting 1/3 fluid oz. (2 teaspoons) of BITHOR SC per gallon of water and applying 1 to 2 gallons of finished spray per mound. Treat mounds with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. Treat a four foot diameter circle around the mound. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

**Mole Cricket adults:** Adult mole cricket control is difficult to attain because of continuous invasion during the early spring. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch when young nymphs are located near the soil surface. Control of larger, more damaging, nymphs later in the year may require using both higher labeled application rates and more frequent applications to maintain acceptable

control. Make applications as late in the day as possible and water in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Treat the entire area where exposure to ticks may occur (not spot treatments). Use higher spray volumes within the specified rate range when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity.

#### **Restriction:**

Do not reapply more than once every seven days, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

**Deer ticks (*Ixodes* sp.)** have a complicated two year life cycle that involves four life stages. Make applications in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks commonly congregate along paths or roadways where humans are likely to be encountered. Apply as necessary from mid-spring to early fall to control their larvae, nymphs and adults.

## **FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS**

BITHOR SC, applied to foliage and broadcast on the soil, controls or suppresses a wide range of listed pests on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowering plants (only apply product prior to bloom or after all flower petals have fallen off) ground covers, bedding plants and foliage plants including plants in interior landscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control. Foliar applications of BITHOR SC also have local systemic activity against insect pests.

#### **Restrictions:**

BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

Follow application restrictions on page [x] (note to reviewer – page number will be added to commercial label) to protect bees and other insect pollinators.

#### Application Sites

For use on ornamental plants: trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior landscapes.

#### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

#### Foliar Application

##### Ornamental Application to Control Ants

BITHOR SC can be used to indirectly control ants when applied to control aphids, scale insects, mealybugs and other sucking insects on ornamentals thereby limiting the amount of honeydew available.

##### Foliar Application Volumes and Application Methods

BITHOR SC mixes readily with water and may be used in many types of application equipment. Mix required amount of product (from the Use Rate Table for BITHOR SC for Foliar Applications below) with the amount of water required to uniformly wet foliage and apply as desired dependent upon the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/ sticker is recommended. If concentrate or mist type spray equipment is used, use an equivalent amount of product on the area sprayed, as would be used in a dilute application. Begin treatments prior to establishment of high pest populations. Reapply as needed, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

##### Foliar Application Use Rates

Use rates for BITHOR SC for foliar application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 100 gallons of water. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 6.7 to 21.3 fluid ounces per 100 gallons, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher listed application rates when maximum residual control is needed. However, applications of up to 21.3 fluid ounces per 100

gallons are permitted at the discretion of the applicator to control any pest.

Use Rate Table for BITHOR SC for Foliar Applications		
Use Rate	Fluid ounces BITHOR SC per 100 gallons of water	Milliliters BITHOR SC per 100 gallons of water
A	21.3	630
B	10.7→21.3	315→630
C	6.7→21.3	200→630

1 fluid ounce = 2 tablespoons = 6 teaspoons

#### Ornamental Pests Controlled by Foliar Application

**Use Rate A:** Ants, Beet Armyworm, Black vine weevil adult, Broad mites, Budworms, Scale crawlers, Citrus thrips, Clover mites, Diaprepes (adults), European red mites, Fleabeetles, Fungus gnats (adults), Grasshoppers, Leafrollers, Mites, Mosquitoes, Orchid weevil, Pine needle scales (crawlers), Plant bugs, San Jose scale (crawlers), Spider Mites, Thrips, Tip moths, Twig borers, Wasps

**Use Rate B:** Bagworms, Cutworms, Fall webworms, Gypsy moth caterpillars, Leaf feeding caterpillars, Tent caterpillars

**Use Rate C:** Adelgids, Aphids, Japanese beetles, Lacebugs, Leafbeetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Mealybugs, Psyllids, Sawfly larvae, Thrips (suppression), Treehoppers, Whiteflies

#### Broadcast Application

##### Broadcast Application Volumes and Application Method

Mix required amount of product in a quantity of water sufficient to uniformly treat area. Use a minimum of 2 gallons of water per 1000 square feet. To achieve optimum control, irrigate treated area in order to incorporate treatment into upper level of soil.

##### Restrictions:

Do not exceed the maximum application rate by applying solution to an area smaller than intended when it was mixed unless doing so will not result in an application rate in excess of the maximum application rate.

Outdoor applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet per year.

##### Broadcast Application Use Rates

Use rates for BITHOR SC for broadcast application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC per 1000 square feet. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 0.4 to 1.65 fluid ounces per 1000 square feet, depending on the target pest. Labeled rates for specific pests within this range are given below. Use the higher labeled application rates when maximum residual control is needed.



Use Rate Table for BITHOR SC for Broadcast Applications		
Use Rate	Fluid ounces BITHOR SC per 1000 square feet	Milliliters BITHOR SC per 1000 square feet
A	1.32⇒1.65	40⇒50
B	0.4⇒0.85	12⇒26

#### Ornamental Pests Controlled by Broadcast Application

**Use Rate A:** White grub larvae (such as Japanese beetle larvae, Chafers, *Phyllophaga* spp., Asiatic garden beetle, Oriental beetle), Imported Fire Ants, Nuisance Ants

**Use Rate B:** Centipedes, Crickets, Earwigs, Pillbugs, Sowbugs, Armyworms, Cutworms, Sod webworms

### SOIL INJECTION AND SOIL DRENCH FOR ORNAMENTAL PESTS

BITHOR SC, applied as a soil drench or soil injection, controls or suppresses a wide range of listed insects on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, foliage plants, ground covers and interior plantscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.)

BITHOR SC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, make applications prior to anticipated pest infestation to achieve optimum levels of control.

Applications to trees for the control of existing borer infestations may not prevent the eventual loss of the tree due to existing damage already caused by the pest and stress to the tree caused by the pest infestation.

**Restrictions:** BITHOR SC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

#### Application Sites

For use on ornamental plants and non-bearing fruit and nut trees, shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants including plants in interior plantscapes.

#### Application Preparation

BITHOR SC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

#### Ornamental Pests Controlled by Soil Injection or Drench Application

Adelgids, Aphids, Armored scales (suppression), Black vine weevil larvae, Eucalyptus longhorned borer, Flatheaded borers (including bronze birch borer and alder borer), Japanese beetles, Lace bugs, Leaf beetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leaf miners, Mealybugs, Pine tip moth larvae, Psyllids, Royal palm bugs, Sawfly larvae, Soft scales, Thrips (suppression), White grub larvae, Whiteflies.

#### Soil Injection for Trees

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

#### Soil Injection Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Injection for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

D.B.H. = Diameter at Breast Height

D.B.H. is measured at 4 ½ feet from the ground.

#### Soil Injection Volumes and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply at a low pressure according to one of the two following methods. Make a minimum of 4 injection holes per tree. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

**Grid Injection:** Evenly space holes on 2.5 foot centers in a grid pattern in the soil beneath the tree's branches/foliage out to the tree's drip line.

**Basal Injection:** Evenly space injection holes around the base of the tree no more than 12 inches out from the tree.

#### Soil Drench for Trees

#### Soil Drench Use Rate for Trees

Use Rate Table for BITHOR SC for Soil Drench for Trees
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

#### Soil Drench Volume and Application Method for Trees

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be

adequately dispersed. Apply solution at a rate of no less than 10 gallons per 1000 square feet around the base of the tree directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier.

### Soil Injection for Shrubs

**Restriction:** Soil Injection is not allowed in Nassau and Suffolk Counties of New York.

### Soil Injection Use Rate for Shrubs

#### Use Rate Table for BITHOR SC for Soil Injection for Shrubs

0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height
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### Soil Injection Volume and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply to individual plants using dosage indicated at a low pressure, making a minimum of 4 injection holes per shrub. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

### Soil Drench for Shrubs

### Soil Drench Use Rate for Shrubs

#### Use Rate Table for BITHOR SC for Soil Drench for Shrubs

0.45 to 0.9 fluid ounces per foot of shrub height 14 to 27 milliliters per foot of shrub height
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### Soil Drench Volumes and Application Method for Shrubs

Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the solution to be adequately dispersed, but at a rate no less than 10 gallons per 1000 square feet around the base of each shrub directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier

### Soil Incorporation for Flowers and Groundcovers

Apply as a broadcast treatment and incorporate into the soil before planting. Application can also be made after the plants are established prior to bloom or after all petals have fallen off; in this case, best control is achieved if plants are irrigated after application.

### Soil Incorporation Use Rate for Flowers and Groundcovers

#### Use Rate Table for BITHOR SC for Soil Incorporation for Flowers and Groundcovers

1.32 to 1.65 fluid ounces per 1000 square feet 40 to 50 milliliters per 1000 square feet
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## PESTS INSIDE AND OUTSIDE OF STRUCTURES

### (OTHER THAN WOOD INFESTING INSECTS)

Bithor SC controls a wide range of nuisance pests inside and outside of structures and modes of transport. Bithor SC can be applied in and around any type of residential or commercial structure, building or mode of transport: non-food/non-feed areas of food/feed handling establishments. Permitted application sites include but are not limited to the interior and exterior of homes, apartments, commercial buildings, manufacturing establishments, office buildings, stores, food processing plants (non-food/non-feed areas), warehouses, schools, factories, hospitals, nursing homes, mobile and modular homes, vehicles and marine vessels.

Bithor SC will not stain or damage any surface that water alone will not stain or damage.

**Restriction:** Do not apply within aircraft cabins.

Follow application restrictions on page [x] (note to reviewer – page number will be added to commercial label) to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

### Dilution of Bithor SC

Use rates for Bithor SC are expressed and mixed according to the percentage (%) concentration solution it forms when mixed in water as found in the table below.

#### Mixing Table for Bithor SC Inside and Outside of Structures

Use Rate	% Bithor SC in water	Fluid ounces Bithor SC to add per gallon of water for desired %	Milliliters of Bithor SC to add per gallon of water for desired %
A	0.068%	0.89	26
B	0.135%	1.78	52

## PESTS OUTSIDE AND AROUND STRUCTURES

### Pests Controlled

Ants (including Carpenter Ants), Armyworms, Bees (except Carpenter Bees), Biting Flies, Blue or Green Bottle Fly, Boxelder Bug, Centipedes, Chiggers, Chinch Bug, Clover Mites, Cluster Flies, Cockroaches, Crickets, Cutworms, Dichondra Flea Beetle, Earwigs, Elm Leaf Beetle, Firebrats, Fleas, Flesh Flies, Flies, Gnats, Grasshoppers, Ground Beetle, Hornets, Housefly, Japanese Beetle, Lady Beetles, Midges, Millipedes, Mole Crickets, Mosquitoes, Moths, Pillbugs, Scorpions, Silverfish, Sod Webworms, Sowbugs, Spider Mites, Spiders, Springtails, Stable Flies, Ticks, Wasps and Yellow Jackets.

### Application Methods

Apply Bithor SC as a solution in the form of a general surface, spot, crack and crevice, void, pinstream or coarse spray to the structure or areas around the structure where pests can enter the structure or where

they have been seen or found or can find shelter. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

#### **Restrictions:**

Do not contact treated surfaces until they are dry.

Do not apply as a space spray.

Follow application restrictions on page [x] (*note to reviewer – page number will be added to commercial label*) to protect bees and other insect pollinators.

Do not apply more than 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year.

Do not treat firewood.

#### **Application Use Rates and Volumes**

Select a Use Rate from the Bithor SC Mixing Table above. Use the 0.135% rate for severe infestations, faster knockdown or longer residual and for Fire Ants, Hornets, Wasps and Yellow Jackets.

Apply at a high enough volume to adequately wet the treated area without excessive dripping or runoff. Higher application volumes may be used if necessary to sufficiently wet vegetation and landscaping with the spray solution. Higher application volumes may also be used for severe infestations, faster knockdown or longer residual control. For high volume applications, Bithor SC may be diluted to lower concentrations by applying the same amount of Bithor SC in greater volumes of water.

#### **Re-Application**

Do not repeat treatments more often than once every 7-10 days. The best efficacy and longest residual control is achieved when the highest listed concentration is used.

#### **Application Locations**

Apply spray to the exterior surfaces of structures and to grounds, lawns, landscaping and plants. Can also be applied to any areas where pests congregate or have been seen.

#### **Perimeter Band Treatment**

To help prevent pest infestation of structures, create a treated zone or band on the structure, soil and vegetation around the entire perimeter of a structure. Apply solution to all surfaces within a band beginning 6 to 10 feet from the exterior foundation of the structure that extends back to the structure and then continues 2 to 3 feet up the exterior surface of the structure from the ground. Application volume will depend upon the nature of the surface being treated. Mulch areas, for example, require more volume and hard surface areas requiring less.

#### **Control of Specific Pests Outdoors**

**Ants (Nuisance ants including Carpenter Ants) Outdoors:** To achieve the highest level of control, locate and directly treat ant nests. Apply solution to ant trails, around doors and windows and at points where ants can be expected to forage or congregate. Apply to

flowering plants (only apply product prior to bloom or after all flower petals have fallen off), shrubs and ornamental plant beds where ants may forage for food (such as honeydew produced by plant-sucking insects). It is recommended that shrubbery and other vegetation directly touching the structure be trimmed away.

**For Ant (including Fire Ant) Mounds:** Treat mounds and area within a 2 foot radius of the center of the mound with 1-2 gallons of 0.135% solution. When mounds exceed 12 inches in size use the higher solution.

**Bees, Wasps, Hornets, and Yellow Jackets:** Always use the highest rate (0.135%). Spray nest openings in ground, in bushes and wherever insects may be nesting. Spray to the point of saturation with a pinstream application. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Boxelder Bug and other Occasional Invaders:** Apply a perimeter application directly to where insects have congregated at points of entry. It may be necessary to also treat trees.

**Centipedes, Earwigs, Millipedes, Pillbugs, Sowbugs, Springtails:** Thoroughly treat mulch areas. The reduction of moisture in mulch areas may also aid in control of these pests.

**House Flies and Cluster Flies:** Spray surfaces where flies may rest. For Cluster Flies, treat in late summer or fall before flies begin looking for winter shelter.

**Mosquitoes:** Apply solution to lawns and landscaping, under decks and to building foundations and other points where mosquitoes may rest. Refer to *FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS* section for mixing and applying large amounts of solution against mosquitoes.

**Fleas and Ticks:** Treat the entire area where insects could be present. Begin treatments in the spring. Insects may be re-introduced by host animals in the surrounding area. Retreatment, not to exceed 9.0 pints (0.5 lb of imidacloprid and 0.4 lb of bifenthrin) per acre per year may be necessary to achieve and maintain control during periods of high pest pressure.

**Scorpions:** Treat around firewood (but not firewood) and other hiding places. Remove piles of material that may serve as hiding places. Apply a perimeter treatment.

### **PESTS INSIDE STRUCTURES (OTHER THAN FOOD/FEED AREAS OF FOOD/FEED HANDLING ESTABLISHMENTS) INCLUDING MODES OF TRANSPORT**

#### **Pests Controlled**

Ants (including Carpenter Ants), Bedbug, Bees (except Carpenter), Beetles (except wood infesting), Blue or Green Bottle Fly, Hide or Leather Beetle, Boxelder Bug, Carpet Beetles, Centipedes, Clothes Moth, Clover Mites, Cluster Fly, Cockroaches, Crickets, Dermestids, Earwigs, Elm leaf Beetle, Fleas, Firebrats, Flies, Gnats, Hornets, House fly, Lady Beetles, Midges, Millipedes, Mosquitoes, Moths, Pillbugs, Scorpions, Sowbugs, Silverfish, Spiders, Springtails, Ticks, Wasps and Yellow Jackets



## Application Preparation

When treating in home food preparation and storage areas, cover all food preparation surfaces and utensils prior to beginning treatment. Thoroughly wash surfaces or items that cannot be covered or removed after treatment and before use. Remove food that cannot be covered. Disconnect fish tanks aerators and remove tanks or securely cover before application occurs.

**Restriction:** Do not allow people and pets to touch treated surfaces until they have dried.

## Application Use Rates

Use a 0.068% or 0.135% solution of Bithor SC. Use the higher rate for severe infestations, faster knockdown or longer residual.

## Application Methods

Apply Bithor SC as a solution in the form of a spot, crack and crevice, void, pinstream or coarse spray. Bithor SC may also be applied with a paintbrush.

Bithor SC may be converted to foam and used to treat structural voids. First form a solution of Bithor SC of the appropriate percentage concentration and volume. Then add required volume of a compatible foaming agent. Verify that the foaming agent is compatible with Bithor SC.

When treating overhead, wear safety glasses, goggles or face shield and a dust/mist respirator.

**Restriction:** For indoor uses apply only as a spot, crack or crevice treatment. Do not apply as a space spray.

## Application Locations

Apply to and around any areas pests or their evidence is seen or found, could hide or rest or could enter the premises including cracks and crevices, behind and under cabinets and appliances, around doors, windows and eaves, in attics and storage areas and around pipes and under appliances. Spot treat floor or rugs beneath furniture, in closets, and storage areas. Do not treat an area larger than 3 feet x 3 feet.

## Control of Specific Pests Indoors

**Cockroaches, Crickets, Firebrats, Scorpions, Silverfish, Spiders, and Ticks:** Apply wherever these pests may hide, enter the structure or congregate such as cracks and crevices, baseboards, water pipe openings, around doors and windows, behind and under cabinets and appliances and within storage and attic areas.

**Bedbug:** To aid in control, apply to cracks and crevices wherever evidence of bedbugs has been found including within empty dressers and closets, on bed frames and box springs and behind high and low wall moldings and wallpaper edges. Not for use as a sole control agent against bedbugs. If evidence of bedbugs is found on or in mattresses, use only products approved for application to this item. Do not apply more often than once every 7-10 days.

## Restrictions:

Do not spray bed linens, mattresses, blankets or pillows. Do not apply to materials which come in direct contact with occupants of the bed.

Remove all clothes and other articles from dressers or closets before application within them.

Do not apply to furniture or upholstery where prolonged contact with humans will occur.

**Boxelder Bug, Centipedes, Earwigs, Beetles, Millipedes, Pillbugs, Sowbugs:** Apply to points of pest entry into structure such as around windows and doors. Apply anywhere else pests may congregate or be located.

**Bees, Wasps, Hornets, Yellow-Jackets:** Always use the highest rate (0.135%) when treating bees, wasps, hornets and yellow-jackets. Apply solution to hiding and breeding places, contacting as many insects as possible. Best results are achieved when application is made in the evening when insects are at rest and to avoid stings. Spray to the point of saturation. Spray as many insects as possible. Remove and destroy treated nests to prevent emergence of newly hatched insects.

**Ants (Nuisance ants including Carpenter Ants)**

**Indoors:** To achieve the highest level of control, locate and directly treat ant nests and ant trails. Apply solution in areas infested by or expected to be infested by ants such as on walls, tile, baseboards, under cabinets and around pipes.

## IMPORTANT READ BEFORE USE

**NOTICE:** Read the entire Directions for Use, Conditions of Sale, Disclaimer of Warranties and Limitations of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

**CONDITIONS OF SALE:** The Directions for Use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond the control of ENSYSTEX IV, Inc., it is impossible for ENSYSTEX IV to eliminate all risks associated with the use of this product such as ineffectiveness or unintended consequences. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ENSYSTEX IV harmless for any claims relating to such factors.

**DISCLAIMER OF WARRANTIES:** Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the Directions for Use under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ENSYSTEX IV MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, under abnormal conditions or under conditions not

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Revised 10/14/15

[EPA approval date]

# DATA PACKAGE BEAN SHEET

Date: 20-Nov-2014

Page 1 of 2

Decision #: 496244

DP #: (424036)

PRIA

Parent DP #:

Submission #: 958956

E-Sub #:

## \*\*\* Registration Information \*\*\*

Registration: 83923-2 - BITHOR SC

Company: 83923 - ENSYSTEX IV, INC

Risk Manager: RM 01 - Venus Eagle - (703) 308-8045 Room# PY1 S-7228

Risk Manager Reviewer: Melody Banks MBANKS

Sent Date:

PRIA Due Date: 02-Mar-2015

Edited Due Date:

Type of Registration: Product Registration - Section 3

Action Desc: (R340) AMENDMENT;NON-FAST TRACK;REVIEW WITHIN RD, E.G. PRECAUTIONARY LAB

Ingredients: 128825, Bifenthrin(4%)

129099, Imidacloprid(5%)

## \*\*\* Data Package Information \*\*\*

Expedite: ☐ Yes ☒ No

Date Sent: 20-Nov-2014

Due Back:

DP Ingredient: 128825, Bifenthrin

129099, Imidacloprid

DP Title:

CSF Included: ☐ Yes ☒ No

Label Included: ☒ Yes ☐ No

Parent DP #:

Assigned To

Date In

Date Out

Organization: RD / IVB3

Last Possible Science Due Date: 01-Jan-2015

Team Name:

Science Due Date:

Reviewer Name:

Sub Data Package Due Date:

Contractor Name:

## \*\*\* Studies Sent for Review \*\*\*

Printed on Page 2

## \*\*\* Additional Data Package for this Decision \*\*\*

Can be printed on its own page

## \*\*\* Data Package Instructions \*\*\*

PYXIS Regulatory has submitted one vol. of data for Carpenter Ants and cited data for several other pest, (see page 12 of product label), see attached bean sheet for cited MRID's. to support these public health pest. Thanks

MRID	MRID Status	Citation Reference	Guideline	86-5 Status
44137401		Silcox, C. (1996) Efficacy of Broadcast Applications of Bifenthrin Liquid and Granular Formulations for Deer Tick ( <i>Ixodes</i> sp.) Control in Turfgrass: Lab Project Number: PDM-004-96: 96-50: PD965021. Unpublished study prepared by FMC Corp. 13 p.		Pass (19-Aug-2010)
44137402		Silcox, C. (1996) Efficacy of Broadcast Applications of Bifenthrin Liquid and Granular Formulations for American Dog Tick ( <i>Dermacentor variabilis</i> ) Control in Turfgrass: Lab Project Number: PDM-005-96: PD965022: PD965122. Unpublished study prepared by FMC Corp. 12 p.		Pass (19-Aug-2010)
44638801		Silcox, C. (1998) Efficacy of Bifenthrin Liquid and Granular Mound Treatments for Imported Fire Ant Control: Lab Project Number: PDM-005-98. Unpublished study prepared by FMC Corporation. 27 p.		Pass (20-Aug-2010)
44891903		Silcox, C. (1997) Residual Efficacy of Bifenthrin Liquid Applications Towards German Cockroaches: Lab Project Number: PDM-024-99. Unpublished study prepared by FMC Corp. 13 p.		Pass (20-Aug-2010)
44891904		Silcox, C. (1999) Evaluation of a Bifenthrin and a Malathion Spray Against Three Species of Mosquitoes: Lab Project Number: PDM-023-99. Unpublished study prepared by FMC Corp. 46 p.		Pass (20-Aug-2010)
44891906		Silcox, C. (1997) Efficacy of Direct Spray Applications of a Bifenthrin Liquid Formulation for Brown Recluse Spider Control: Lab Project Number: PDM-019-99. Unpublished study prepared by FMC Corp. 14 p.		Pass (20-Aug-2010)
44891907		Silcox, C. (1997) Efficacy of Direct Spray Applications of a Bifenthrin Liquid Formulation for House Fly Control: Lab Project Number: PDM-022-99. Unpublished study prepared by FMC Corp. 14 p.		Pass (20-Aug-2010)
44891908		Silcox, C. (1996) Efficacy of Direct Spray Applications of a Bifenthrin Liquid Formulation for Black Widow Spider Control: Lab Project Number: PDM-025-99. Unpublished study prepared by FMC Corp. 16 p.		Pass (20-Aug-2010)
46393501		Richman, D. (2004) Residual Efficacy of FMC 54800 Formulations to Control Public Health Pests. Project Number: PDM/060/04. Unpublished study prepared by FMC Corp Agricultural Products Group. 135 p.	810.3400/Mosquito, black fly, and biting midge (sand fly) treatments	Pass (25-Aug-2010)
49484907		Kellogg, M. (2014) Summary of Bithor SC Carpenter Ant Efficacy Data. Project Number: EN/201401. Unpublished study prepared by Spokane Falls Community College. 17p.	810.3500/Premises treatments	Pass (21-Oct-2014)
49484907		Kellogg, M. (2014) Summary of Bithor SC Carpenter Ant Efficacy Data. Project Number: EN/201401. Unpublished study prepared by Spokane Falls Community College. 17p.	810.3600/Structural treatments	Pass (21-Oct-2014)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

**MEMORANDUM:**

**From:** Jennifer Urbanski, Ph.D.

**Date:** 12/30/14

**Subject:** PRODUCT PERFORMANCE DATA EVALUATION RECORD

**DP barcode:** 424036

**Decision no.:** 496244

**Submission no:** 958956

**Action code:** R340

**Product Name:** Bithor SC

**EPA Reg. No or File Symbol:** 83923-2

**Formulation Type:** liquid

**Ingredients statement from the label with PC codes included:** imidacloprid, 5%, bifenthrin, 4%

**Application rate(s) of product and each active ingredient:** 0.068%-0.135% Bithor SC in water, applied as a general surface, spot, crack or crevice treatment, treat until wet without runoff or drip

**I. Action Requested:** Review data to determine if carpenter ants can be added to the label

**II. Background:** One study was provided to support the use of the product to control carpenter ants.

**III. MRID Summary:**

**49484907**

**(1) GLP or non-GLP?** Non-GLP

**(2) State the purpose and briefly summarize the methods and results as indicated by the study authors:** A study was conducted to test the efficacy of Bithor SC at labeled rates of 0.068% and 0.135% on carpenter ants using unfinished wood panels (porous) and ceramic tiles (non-porous). Colonies of carpenter ants were collected in Idaho and maintained in the laboratory with a supply of honey, a protein source, and water. Two sets of substrates (porous and non-porous) were sprayed with Bithor SC at either 0.068% or 0.135% until runoff and either used 24 hours after drying or aged 30 days before testing by placing in an unheated garage where they were exposed to temperature, light, and humidity fluctuations. For each treatment, 5 replicates of at least 60 carpenter ants were used. Ants were exposed for either 5 minutes or 30 minutes then held in clean petri dishes. Mortality was monitored for 18 days (day 1, then every two days for 18 days or until there was 100% mortality). One hundred percent mortality was reached one day after exposure for the following treatments on surfaces aged for 1 day: 0.068% on tile after 5 minutes of exposure; 0.068% on tile after 30 minutes of exposure; 0.068% on unfinished wood after 30 minutes of exposure; 0.135% on tile after 5 minutes of exposure; 0.135% on tile after 30 minutes of exposure; 0.135% on unfinished wood after 5 minutes of exposure; and 0.135% on unfinished wood after 30 minutes of exposure. At the 0.068% rate after 5 minutes of exposure to unfinished wood, there was initially ~80% mortality after one day. There was some recovery in knocked down ants, but by 11 days there was >90% mortality, with 100% mortality reached at 19 days. Control mortality remained at an acceptable level. One hundred percent mortality was reached one day after exposure for the following treatments on surfaces aged for 30 days: 0.068% on tile after 5 minutes of exposure; 0.068% on tile after 30 minutes of exposure; 0.135% on tile after 5 minutes of exposure; 0.135% on tile after 30 minutes of exposure; and 0.135% on unfinished wood after 5 minutes of exposure. Greater than 90% mortality was reached for the treatments on surfaces aged for 30 days: at 19 days for 0.068% on unfinished wood after 5 minutes

of exposure; at 13 days for 0.068% on unfinished wood after 30 minutes of exposure; and at 7 days for 0.135% on unfinished wood after 30 minutes of exposure. Control mortality remained at an acceptable level.

**(3) State conclusions as they relate to study results:** Overall, the results support the use of the product to control carpenter ants. For substrates aged for 30 days, the product was efficacious at the 0.135% rate and at the 0.068% rate on non-porous surfaces.

**(4) Is the study acceptable?** Acceptable

#### **IV. RECOMMENDATIONS:**

The addition of carpenter ants to the label at the listed rates is acceptable.

ATTENTION PM TEAM

ADDITIONAL CSFs CAN BE FOUND  
IN EARLIER VOLUMES OF THIS JACKET  
INCLUDING IMAGED VOLUMES.